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Farm Department.

Conducted by J. H. Brown, whose farm is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Battle Creek, Mich.

THE EDITOR'S FARM NOTES.

SUGAR BEETS AND BEET SUGAR.

In this issue several correspondents discuss their experience in making molasses from the juice of sugar beets. There is no doubt but that a fair grade of molasses or syrup may be secured with a cider mill and evaporator combined, but will it pay the beet grower to continue this work beyond the experimental stage? That is a question, we think, no one can yet answer with any degree of confidence.

No one knows what the future growth of sugar beets and the manufacture of beet sugar may develop in the work of machinery construction and refinery processes. A complete beet sugar plant now costs from \$250,000 to \$500,000, but we believe that in ten years' time the cost of a similar plant will be reduced from 25 to 40 per cent.

The demand for this class of machinery will stimulate inventors and experimenters to not only simplify the process, but cheapen the cost of the finished machinery itself. We are in the infancy of beet sugar manufacture in the United States, and American ingenuity will eventually accomplish much in the future improvement over present methods.

We do not know what the future may bring forth in the improvement of beet molasses or syrup-making machinery for "home use" on the sugar beet grower's farm, but it seems to us that when we have the beets harvested, ready for delivery or to ship to some factory, we should prefer "resting on our oars" than to make up our own molasses.

Farmers cannot do everything, and the trouble with many of us is that we attempt too much sometimes by way of adding variety to our farm work. General purpose farming is all right, but it should not be so very "general" that we may not accomplish some good "purpose."

MOLASSES FROM COOKED BEETS.

I. J. B., Hillsdale Co., Mich., writes: "A farmer in this section raised some sugar beets, took them to a sorghum mill and had some molasses made. After reading over a bulletin from the Department of Agriculture, they cooked the beets before pressing out the juice, then made up as one would ordinary sorghum. I think they found a bushel of beets would make a gallon of molasses."

Has any other experimenter tried cooking the beets before extracting the juice? Which is preferable in your opinion?

FEEDING COWS.

Are pumpkins good feed for milch cows? Will the seeds dry up the cows? Is corn ground alone, or corn, cob and all, the best feed for cows?

The Genesee mills grind corn, cob and all. I should think the latter would be better, because the cob

ground in would make the meal in the stomach a porous mass, and hence easier to digest. Also, I should think, the cob would contain a little nourishment. I would like to know what the up-to-date idea is.

Hillsdale Co., Mich.

I. J. B.

We should feed the pumpkins in small quantities and pay no attention to the seeds, as they will do no injury. But if you are feeding heavily, we should advise removing the seeds. It is frequently claimed that many pumpkin seeds are injurious, but we have had no experience in feeding pumpkins to our cows.

Theoretically, corn and cob, or ear corn, ground together should make better feed for cattle than corn alone. But the cob must be very finely ground, for the hard flinty plates which encase the points of the kernels are bad things to come into contact with the mucous membrane of the stomach and intestines.

We have fed both corn and cob (or cob meal), and corn meal alone, and

fanning mill would not take out, which were the seeds sticking fast to their hulls, would float on the water, so they could be skimmed off. Thus I have been enabled to raise a crop that seems to be perfectly free from smut and all weed seed, though very slightly mixed with another variety of wheat.

There is a great deal of complaint from smut this year. I would urge all farmers to procure wheat free from smut for seed, or else give their seed wheat treatment for the same. Either the hot water or blue vitriol treatment will free the seed from smut, if properly applied.

Oakland Co. Mich.

L. R. HUNTER.

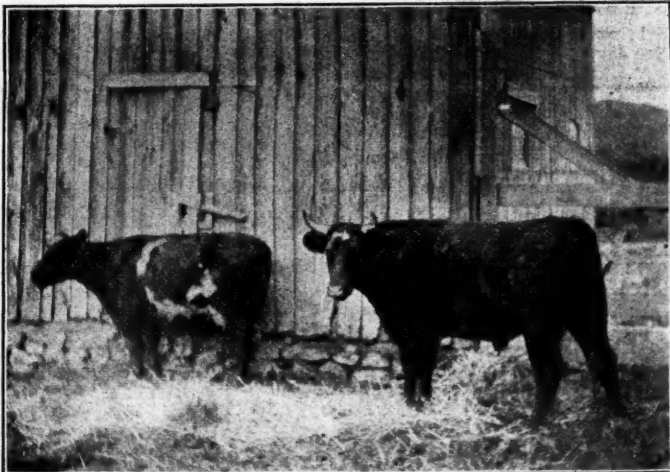
WEED DESTRUCTION ON THE FARM.

From our Special English Correspondent.

A year ago we referred to some experiments which had been conducted in France in one of the chief wine districts in connection with the

which the crop was growing luxuriantly, but which was terribly infected with charlock cruciferae, particularly the wild radish, which is very similar in appearance. The solution employed was a 5 per cent solution of sulphate of copper. A few days afterwards, when inspecting the spray plot, he noticed that the weeds referred to had become yellow, as though they had been burnt by the sun. On the other hand the oats were similarly pale, and he believed they had been destroyed. However, by degrees, the charlock and its friends became black and absolutely dry, while the oats, although preserving the yellow tint, were full of vitality, and it was found that while the weeds were destroyed and while the outside leaves of the oats did not revive, the plant was alive and strong, quickly formed new leaves, and very soon could scarcely be distinguished from the rest of the field. These results coincided with two other experiments which Mr. Wagner had conducted, and they confirmed the work of the experiments in France and elsewhere. We come, however, to a still more important feature. Growing with the oats was a plant of red clover, and the grower was not a little curious to see the effect the cupric solution would have upon it. A short time after spraying, the clover on the land treated actually appeared more luxuriant, and the greenness of its leaf was more pronounced than that of any other part of the field, while, when the crop was mown for hay it was more vigorous on the sprayed portion of the field than elsewhere. Mr. Wagner raises the question as to whether the action of the sulphate of copper in bringing about this result had been of direct benefit to the plant, or whether it had simply destroyed the parasitic organisms in the soil which are so exhaustive to plant food.

He next refers to another form of experiment which has been conducted by Herr Schultz, director of the Agricultural Winter School of Soest. On the twentieth of July last, winter barley was sown with the drill on a plot of land of a certain size, together with twelve kilograms, about 26½ lbs., of the seed of wild mustard for the growth of which the soil was particularly favorable. In due course both plants appeared and in a month the charlock had from four to six leaves and its development was considered sufficient for the application of the treatment. In order to avoid poisoning the soil, which is very possible by the frequent use of such a powerful material as sulphate of copper, and because of its cost when used on a large scale, sulphate of iron was purchased and used in the form of a solution at the rate of thirty per cent, or one decilitre per square metre, a decilitre being one-tenth of a litre, which is 1.76 pints. The mixture was applied by the machine now generally used for the purpose on the 20th of



GOOD FARMERS' CATTLE.—See page 459.

our mill can do good work in crushing and finely grinding ear corn. But we have discarded the cob entirely for feeding purposes, using bran instead. It takes much more power to grind the cob, in fact, more than to grind the corn alone, and when we can purchase bran for \$12 to \$14 we prefer the bran. The cobs are worth much more to us when used as fuel.

The chemist finds a little nutriment in the corn cob, but the cow does not always agree with the chemist. We should confer with both in preparing a new ration.

For The Michigan Farmer.

TREATMENT OF WHEAT FOR SMUT.

Last year I bought 46 bushels of Dawson's Golden Chaff wheat from an Ionia grower. When the wheat came to hand I found it too smutty to use for seed. It was also full of red root seed and hulls. I gave it the blue vitriol treatment for smut, soaking it 12 hours in a solution of blue vitriol made by dissolving one pound of vitriol in 24 gallons of water. Also found that what red root the

destruction of wild mustard or charlock, and other cruciferous plants of the same detestable character, when growing in corn crops. The occupier of a vineyard had been making some tests in the spraying of his vines, when he noticed that the spray which had fallen upon charlock had destroyed them. Forthwith an experiment was made upon a crop of oats in which charlock was growing with great freedom. The oats were practically undamaged, while the charlock was destroyed. The discovery caused considerable interest to be evoked on the continent, with the result that many experiments of a more carefully arranged character were carried out, both in France and Germany, and we propose to describe some of these experiments, as related by Mr. J. P. Wagner, who says that the numerous tests in Germany have been equally as successful as those which were related last year to the National Society of Agriculture of France.

In the middle of June last year Mr. Wagner sprayed a piece of oats to the extent of fifty square metres—a metre being about 39 inches—in a field in

August at 6 in the evening. Three hours later rain fell heavily, and the plants were well washed. On the following morning the experimenter was not a little surprised, on examining the plot, to find that the charlock had been destroyed. The weakest plants were black to the roots, while the strongest, although slightly green on the stem, were equally black on the following day. The extremities of the blades of barley were yellow, and vegetation was apparently arrested for some days, the plant taking about a fortnight to recover; but in a month after the treatment, while it was absolutely healthy, it contrasted advantageously with the barley which had not been sprayed, and which was infested by the weeds. A question arises, which the writer does not refer to, as to whether the check which the plant receives from the spray is not more desirable than that which the plant receives through its entire career from its contiguity to and robbery by the weeds, quite apart from the fact that, seeding as they do, the soil is still further infested for damage to future crops. It is pointed out that these experiments, following in the wake of a crowd of others made in different parts of the continent, sufficiently prove that sulphate of iron is as efficacious as it is certain in its destruction of charlock.

Now we come to the quantity of sulphate which it is necessary to use in order to obtain the requisite result, for upon this depends not merely the effective result of the work, but its entire possibility, as it must be obvious that if too costly farmers could not employ it. A plot of land was divided into five parts, and the whole of these were sprayed with solutions of different strengths on the 24th of August, the crop being a portion of the barley crop to which reference has been made. The strength of the solutions of the sulphate of iron varied from 5 to 25 per cent. The charlock plants were strong, and in many cases had commenced to develop their buds. The spraying took place in the afternoon of a day which was dry and sunless, and no effect was visible immediately after the operation. The spray soon evaporated, leaving the tiny particles of sulphate which had been held in suspension by the leaves. During the night which followed, dew was deposited upon the whole of the plants; and the following day this evaporated also, and left the sulphate exposed as before.

It subsequently appeared that the solutions containing 15, 20 and 25 per cent. had all accomplished their work of destruction. Some of the stems of the charlock which were exceptionally strong appeared to have escaped, but it was questioned whether this was not owing rather to the circumstance of ineffective spraying than to want of intensity in the solution. At all events it was found that the work was quite sufficient for the purpose and that a 15 per cent. solution is sufficiently strong.

In looking at the question from a practical point of view, it is necessary in such a matter as this to employ methods which demand as little time as possible as well as little expense. There is, as far as I know, no single effective method of removing charlock from a field of corn. When, therefore, by the use of a spraying machine and the use of so simple a material as sulphate of iron, a whole field of corn can be saved without the slightest permanent damage either to the corn itself or to the clover growing with it, then it would appear that we have at least one more effective aid which will prevent the expenditure of money for labor on the one hand and the deterioration of a crop on the other. In bad cases the cost of pulling or of heading the charlock, always a dangerous experiment, is avoided, and yet in each case the cost is infinitely more than the cost of spraying and of the material employed. Apart from this we may take it for granted that one or perhaps two treatments may entirely remove the charlock from the soil in which it has been inherent for a generation, costing immense sums of labor and invariably minimizing the crops. The cost of the experiments which we have related amounts to about 3s. 2d. or \$1.24 per acre. Six hundred litres of the solution of a strength of 15 per cent. were employed per hectare, so that 240 litres, or about 53 gallons, will be employed per English acre.

The rapidity with which the work could be completed will depend upon the form of the machine employed. It is obvious that a hand spraying ma-

chine, costing \$7, will be of little value on an average corn farm. It would be necessary to employ a horse machine, which, each time it crossed the field, would cover from six to 10 yards, and in this way a great deal more land could be sprayed in a day than could be either harrowed or drilled. We in England need awakening to this and other questions. We are years behind the Irish in spraying our potatoes, behind you Americans in spraying our fruit, and behind the French and Germans in spraying every kind of plant which is grown in the garden and upon the farm. While we are always last in matters of this character, we invariably take up each system which our competitors abroad initiate, and follow their example. Perhaps some of your farmers will be induced to make one of these tests in connection with their work of corn growing.

AGRICOLA.

For The Michigan Farmer.

ABOUT SUGAR BEETS.

In The Farmer of November 26, Mr. Adolph asks whether he can make molasses from sugar beets by the aid of his cider mill and an evaporator. Yes, of course, he can; but the molasses will not taste well.

A neighbor claims to have seen some molasses made from sugar beets which tasted very much like maple syrup, in fact was very fine. A little hickory bark was used in the boiling down process. Would like Mr. Adolph to try it and report result through The Farmer.

I have some beets but no cider mill machinery. It might be a good thing if farmers could manufacture their own syrup. The producer and consumer would certainly be very close together in that case. There seems to be quite a distance between them where we sell our beets for sugar. For instance, our factory has been selling sugar for \$5.17 per hundred pounds in car lots. They pay \$4 for a ton of beets that makes 240 pounds of granulated sugar. The agricultural department at Washington says it costs about \$3 to make a ton of beets into sugar, certainly not more than that, as that would bring the factory's expenses to \$750 per day.

The 240 pounds of sugar would cost the factory \$7, for which it receives \$12.40, a clear profit of \$5.40 per ton. I feel a little delicate about mentioning the bounty of \$2.40 over and above this.

The farmers of Bay county know a good thing when they see it. They know they have a first-class sugar factory and first-class business men to manage it. They know that they have been raising some first-class beets and they are reported to be looking happy. Why shouldn't they be? They can sell all the beets they are able to raise and get the cash for them, too. And besides they are the means of making the other fellows happy with their \$7.80 per ton profit.

Yes, we are glad we have the sugar factory. We like to see the black smoke roll forth from the chimneys and see the half mile or more of loaded teams waiting to get inside the gates. If a few fail to get in before the gates close for the night they keep on smiling and conclude to continue raising beets for ten cents a bushel. But when it comes to pitting about two-thirds of them, and getting them out after the ground is frozen (the farmers can only draw as the factory orders them) they kick.

Bay Co., Mich.

J. B. STEVENS.

(Now we begin to hear about "kickers," even in this latest industry of Michigan farmers. We should be pleased to hear from one of these "kickers" direct—on paper, of course. We are anxious to hear from one or more farmers who have been hauling their own beets to this factory.—Ed.)

For The Michigan Farmer.

SUGAR BEET MOLASSES.

In The Farmer of November 26, a subscriber asks about making molasses from sugar beets. One farmer near Rochester, who owns a cider mill, has tried it with success. An account of it was given in The Farmer of June 13, 1896, and, as it seems to fit this case, the substance of the article will bear repetition.

The beets were ground in a cider mill and pressed as though they were apples. It was found that a bushel of beets would yield four gallons of juice, which would give two quarts of syrup when boiled down. The cost of grind-

ing and pressing would be about one cent a gallon for the juice, which would make the cost of the syrup eight cents a gallon, not including the cost of beets, the evaporating and the washing of the beets before grinding.

The pulp was fed to cattle, and was considered nearly equal to the whole beet. Clarifying was done with milk, soda, or egg, in a way similar to that for maple sugar. The syrup was of a good quality, but the beets gave it a flavor which many would find objectionable, though some like it. The total cost of making was estimated at not more than 20 cents a gallon, exclusive of the cost of beets.

This experiment was made in 1895, before any factories had been built in the State for the manufacture of sugar, and when the interest in the subject did not amount to very much. But the conditions remain much the same. The advantages and disadvantages of making syrup are about as they were then. The home-made article would be of little commercial value on account of the flavor. It would not be cheap enough to compete with that from the factories, which is free from the objectionable taste of the beet.

In this experiment the cost of the beets was placed at 10 cents a bushel, which would make the syrup worth 40 cents a gallon. At the factories contracts are made for from \$4 to \$6 a ton, which would make the roots worth from 12 to 18 cents a bushel. The pulp taken from a cider press would be of greater value than that from a factory, but in this case it was found that it did not keep well, and for that reason only a little grinding could be done at a time. As the pulp is too valuable to lose, this is an important consideration.

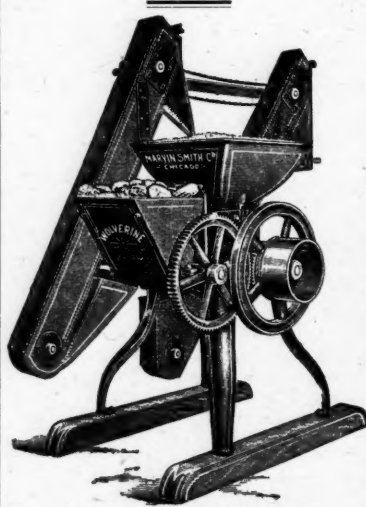
In such a case as this the experience of one man must not be taken as settling the question, yet it is more likely that the estimates were made too low than too high. There seems to be little encouragement to induce the manufacture of molasses on a small scale. It may be that some future inventions will make it possible to grind and press the beets on a small scale, evaporate the juice, and either refine it at home or send to a factory for the purpose. It would save considerable expense to the producer in the way of hauling the beets to the factory and the pulp home if the crop could be made up where grown, but there is little reason to hope that it ever can be done.

It is evident that molasses can be made from the beets by means of such machinery as is within the reach of nearly every Michigan farmer, but the practicability of it is another matter. It will certainly do no harm to try it.

Oakland Co., Mich.

F. D. W.

(This is the experiment to which we referred some time ago, but could not find the location of the experimenter.—Ed.)



An Improved Grinding Mill.

The cut gives a good representation of the Wolverine Grinding Mill, manufactured by the Marvin Smith Co. of Chicago. It grinds all grains either singly or mixed, and crushes and grinds ear corn. Its claim is that it excels all other mills in the small amount of power required. This is an advantage of undoubted merit; many farmers already own light horse powers and would buy a grinding mill if they could be assured that their power was sufficient to operate it. This machine seems to fit such cases exactly, as it can be run easily with light power. Can also be run successfully with a power windmill. An elevator conveys the crushed material to the grinding hopper, as will be observed in the cut. This mill is very strong and durable, being constructed entirely of iron and steel, and will last indefinitely.

Marvin Smith Co. publish a large catalogue which they will be pleased to mail free to all readers. Their prices are remarkably low for the high quality of the goods they offer.

ANOTHER EXPERIMENT IN MAKING MOLASSES.

In the issue of The Farmer of Nov. 26, L. P. Adolph asks if he can grate his sugar beets in his cider mill, press out the juice, and make good molasses from it by boiling down in an evaporator.

Now, Mr. Editor, this is just the thing that I have had in my mind for more than a year. Last year, for some cause or other, my beets never came up, but I tried again this year, and raised a fair crop.

I took 15 bushels to the cider mill, and they were run through the grinder and the juice pressed out and put into a steam evaporator and boiled down to molasses of a quality about equal to "New Orleans." We obtained just five gallons from the 15 bushels of beets.

The juice, as it came from the press, was nearly as black as ink, and had a rank beet taste. But as it began to boil the black came to the top and was skimmed off, and the beet taste was gone. It is a dark, very sweet molasses, very good for cooking, and many like it on buckwheat cakes. I would be pleased to hear from anyone else who has tried the experiment.

Ionia Co., Mich.

GEO. H. HOYT.

Please give to some friend the extra copy sent you and ask him to subscribe for The Michigan Farmer at 60 cents a year.

Good Grinding Machinery.

The Stover Manufacturing Company, of Freeport, Ill., have used their experience of seventeen years in perfecting the Ideal Double Geared Mill, a cut of which is shown herewith. It is simple in its construction



and operation, and although its parts are heavy and strong, it is remarkably light draft and is capable of doing all the grinding that can be done by two horses with any mechanical device ever invented. Anchor rods, a perfect patented device for securing stability, are furnished free with each mill. The makers of the Ideal Double-Geared will send descriptions and prices on application.

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CHRISTMAS CATTLE.

We notice reports in the Chicago daily papers of bunches of choice Christmas cattle that have been on sale the past two weeks. One day, J. Emerson, of Iowa, and L. H. Kerrick, of Illinois, were in with some of their champion Polled-Angus steers. The Journal said there was no end or stint of praise for these Apollos of the bovine families, and opinion was about equally divided, but the old-time expert buyers or sellers seemed to lean towards Evans' 15 head, that averaged 1,578, selling at \$6.25 to S. & S. for the New York market. That they were an ideal lot no one could deny, filling all the hopes and ambitions of the breeder and salesman. They were the champions of the Omaha exposition. The Kerrick lot were a close second, averaging 1,630, and selling for \$6; not as fine as the Evans steers, but "beef to the heels, like a Mullingar heifer," said Armour's head buyer. There was some little advantage on the Evans side, as they had 107 head other good steers that helped to sell the blacks. As everybody in the trade knows, Mr. Kerrick is a famous breeder, and was the winner with his blacks at the Coliseum last year, capturing the sweepstakes prize.

The top sale of the year, however, was that of a pair of premium exposition Herefords, a yearling weighing over 1,300, and a 2-year-old weighing over 1,500, the average weight being 1,530, at \$6.50. They were bred and fed by W. S. Van Natta, of Indiana. The yearling was the sweepstakes winner in his class at Omaha. The lot was purchased for the Chicago city trade.

Time was when Michigan sent a few of these premium steers to market each season, and a few hundred others that were only second to such champions as those mentioned. But that time has passed away and the mongrel scrub is devouring the substance of farmers, and giving very poor returns therefor, where once the grand Short-horn and the beautiful Hereford brought honor and profit to their feeder. We hope the time is coming when they will be restored to their old position upon the farms of the State.

GOOD CATTLE FOR FARMERS.

On the first page of this issue appears a half-tone from a photograph taken by Mr. J. H. Brown in the barnyard of Mr. Eugene Lovell, of Climax. It represents a high-grade Shorthorn steer and his dam, a high-grade Shorthorn also. Mr. Lovell has a number of such cows, bred up for years by the use of pure-bred bulls. The cows are good milkers, and furnish good carcasses of beef when their usefulness as milkers is ended. The steer calves make just such cattle as the one represented in the cut. They mature a year earlier than a scrub or a mongrel from some half-bred bull of the dairy breeds, and when ready for market his quality and make-up insure his selling for from one to two cents per pound more than the mongrel. We call such cattle good farmers' cattle. The late A. S. Brooks called them good christian cattle, because they were fit to live or fit to die. Any farmer in this State can have just such cattle in his barnyard, and at no more expense than scrubs. A little good blood and generous feeding is all that is required. And wherever such cattle are to be found, buyers will be on hand to purchase them at a good price. Such a steer as the one in the cut makes his own market. His pedigree and blood shows in every line, and will be endorsed by the drover, the butcher, and the consumer.

For The Michigan Farmer.

BLOATED CATTLE.

Bloating in cattle comes from a variety of causes, and in some breeds it appears to develop more easily than in others. Cows taken from winter food and turned loose upon a good pasture field are apt to bloat. In changing cattle from one kind of feed to another bloating is almost sure to develop, unless the change is made very gradual. Bloating does not necessarily mean in-

digestion, as many supposed to be the case a few years ago, but this disease may sometimes accompany it. It is more generally an indication that the bulk of the food taken into the stomach is fermented, and this destroys the gastric juice, and causes the rapid formation of gas.

The true remedy is a preventive one. Be careful in changing the food of the animals, and never let them eat too much of any one thing. But if for some reason they show signs of bloating a dose of colchicum, which is the active principle of the saffron root, can be given safely. This should be given in the dilute form, and in small doses. This will correct the acidity of the stomach, and in the early stages of bloating cure the disease without any discomfort to the animals. From three to five drops of the liquid colchicum in the animal's water will suffice. The dose can be repeated if the first does not perform the work satisfactorily. It must be remembered in administering this medicine that it is a deadly poison when given in large doses, but if given in homeopathic doses it is very beneficial. The animals should be fed very sparingly for a few days after the medicine has been administered. With a little care the most stubborn cases of bloating can be cured.

New York.

PROF. JAMES S. DOTT.

STOCK NOTES.

The Holstein-Friesian Association will hold its annual meeting at the Hudson House, Lansing, December 20th, at 7 p. m. All interested are invited to be present. C. L. Seeley, Secretary.

Wm. Fishbeck & Son, of Howell, report the following recent sales from their herd of Shorthorns: To E. H. Demiston, Kalamazoo, Mich., bull calf Lord Acklam 12th, 133100; to W. S. Bridge, Trenton, Mich., bull calf Lord Acklam 13th, 133102; to J. B. Hummel, Mason, Mich., 5-year-old cow Baroness C. (Vol. 40, page 529).

Lice will sometimes appear on the necks and heads of hogs. They can be killed or driven off, says a correspondent, by sponging the neck and around the ears with kerosene. An easy and effective method is to construct a wallow having a capacity of twenty or thirty gallons of water, fill the same with water, and pour on it a cupful of kerosene. The hog will know what to do as soon as he sees the wallow, and the kerosene floating on the water will be quickly effective.

The Drovers' Telegram says: "The fact that the average weight of hogs at Kansas City and other markets in the southern part of the hog territory is lighter than at northern points has called out some comments recently. The head buyer for a packing firm at Chicago attributes it to the differences in breeds. He says that the Berkshire predominates at southern markets, and Poland-Chinas, which are longer in fattening, are in large numbers in the north." That explanation is simply humbug. The fact is the two breeds mentioned are so similar in their ability to mature quickly on full feed that the difference would not be observed. The southern farmer grows lighter hogs because he feeds lighter. It is not the breed but feed that makes the difference in weight.

One of the curiosities of the cattle market, says the Chicago Journal, that may be mentioned is that one, old, threadbare declaration that "common cattle" go lower every day in the week; one never hears a cattle salesman say that this class ever advanced a mill; always lower. We know of a salesman that this year so far has quoted "common cattle lower." Now, what this man means by "common cattle" no one seems to know, as, according to this salesman's notion, such would have sunk out of sight long ago. It don't require much mathematical skill to "figure out" a decline of 10c. a day on \$4.50@4.60 cattle, for instance; also 10@15c. a week for 52 weeks. Yet there are salesmen here who report this ridiculous statement from day to day, and year in and year out.

In a late issue of Hoard's Dairyman, a correspondent signing himself J. A. M., says: The Armour Co. has for the past six months been buying bacon hogs in Canada. With regard to their venture they write: "It has been a revelation to us to see the fine condition and splendid appearance of the Canadian hogs, and we feel sure that the Canadian system of careful breeding and feeding is the correct one. The Canadian hog raiser is away ahead of the American at present, at least so

far as the English market is concerned. The Canadian singled Wiltshires command a very high premium and rank almost equal with the finest Danish bacon in the London market." About six months ago the Armour Co. purchased some hogs in the Canadian markets to test their quality. They paid considerably more than they had to on this side of the line. We never heard that the company made more than one purchase, and certainly interviews with its representatives, published in the Chicago live stock and agricultural journals, stated that the experiment would not be repeated. There was no money in the venture. Neither did these published reports refer to Canadian hogs in any such terms as does this correspondent. By the way, is he raising these bacon hogs? If so, what price do they bring him in comparison with good corn-fed heavy hogs? The price is what tells the whole story, and the Armour Company are paying more for good heavy hogs in the Chicago market than for the best bacon ones on sale.

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LOOK OUT FOR THE COLTS.

The sudden and rather unexpected appearance of winter, with storms and severe cold weather for so early in the season, caught many farmers with unfinished work on hand. A good many were carrying out plans for the care of their live stock during the winter, and they were not completed. It is under such circumstances that the colts on a farm are sure to be badly neglected. The dairy cow at once notifies her owner that light feed and poor shelter will cut down his receipts, and she must not be neglected. The drove of hogs being fattened are sure to make themselves heard when feed is short, and promptly stop gaining in flesh if their owner shortens their rations. That bunch of steers begins to fall off in flesh under poor feeding and exposure, and the farmer sees his profits decreasing from day to day if their wants are not supplied. It is the same with the lot of lambs which are being got ready for the Christmas market. They begin to shrink in weight if not cared for properly, and the farmer hastens to repair any shortcomings in their rations, as he knows by experience the cost of keeping lambs that are not steadily improving. It is the same with the farm poultry. The housewife soon finds her supply of eggs running short, and her chickens getting thinner every day. The wants of the money-makers on the farm are being brought to the attention of the farmer every day, and consequently they do not suffer much from neglect.

But how is it with the colts or the yearlings that are doing their best to pick up a living around a straw stack, which furnishes their only food and shelter? Feed given them will not be returned as a rule for two or three years, and they have no argument to offer against the treatment they receive, as have the other classes of stock referred to. They are put off with a promise of better things in a short time, and they shiver in the cold, and grow gaunt and pot-bellied trying to stop their hunger with the only ration obtainable. No wonder they become stunted and mis-shapen, and their coats become as rough as that of a buffalo. Their heads grow large and coarse, their necks thin, and their bodies are drawn into as small a compass as possible to try and escape the cold blasts which search every depression in their thin frames. If under such conditions the colts live through winter, they come out "spring poor," and so stunted in growth that they never recover their natural form. They can never attain the growth or development which are required to bring a good price when matured. The man who owns them is sure there is no money in raising colts. He finds more profit in hogs, sheep or cattle, and never stops to consider the reason. Such a farmer should never attempt to raise a colt. Those he puts in market are nearly unsalable, and help to depress the value of better ones. He is far better out of the business, and should leave it to others who have the patience to wait for their returns, and are not afraid to invest time and feed in developing their colts into well-grown, handsome animals. If you have some colts standing shivering around your straw stack, better sell them at once, no matter at what price, than allow them to suffer any longer. You will get more money out of them, and your conscience will be clearer.

FINISHING OFF HORSES.

In a bulletin from the Iowa Experiment Station the question of finishing off horses for market is discussed, and some of the methods of those who make a specialty of the business detailed. One of the parties referred to in the bulletin is a farmer in that state who makes it a practice during the latter part of the summer to pick up one or two carloads of good, salable horses and fatten and finish them for market. He buys from neighboring farmers and claims that there is more money in it than in feeding steers. These horses are grazed in the meadows and stalkfields, supplemented with corn-fodder, until December or January. They have but little if any shelter until that time and make good gains.

They are then given 50 to 60 days of feeding and fitting in the stable, during which time they are groomed and put in the best condition for the market. This man employs a horse dealer to help him in buying.

Another feeder in the same state prefers to buy in the spring. He feeds ten ears of corn at 5 a. m., ten ears of corn at 10 a. m., a chopped ration at noon, composed of two-fifths bran, two-fifths chopped oats and corn and one-fifth oil-meal; corn again at 5 p. m., and oats or corn at 8 p. m.; clean, bright hay with each grain feed, clover hay preferred if properly cured. These methods give heavy gains and materially add to the value of horses thus handled. There is no doubt whatever that it pays to properly fit horses for market and make them fat. There may be some question as to whether flesh put on in this way adds much to their serviceability, but as long as the fat horse sells best this question may safely and profitably be ignored by the producer.

In other words, it pays to produce what the market demands, and these horses should be finished on the western farms, where there is always an abundance of cheap feed. A well-known auctioneer who was recently selling a lot of well-fed horses at a public sale very truthfully remarked that "Corn would have brought \$10 a bushel in the shape of flesh on these horses' backs." That statement applies with equal force with a great many horses and other stock that annually goes to market.

HORSE GOSSIP.

A prize of \$100 will be offered for the worst bucking bronco exhibited at the live stock convention to be held at Denver, Colo., in January. The judges should be compelled to ride the animals.

More than 60 per cent. of the season's races scheduled in Kansas had to be declared off for lack of entries. There is no state in the Union which can promise more and perform less than Kansas.

The London Live Stock Journal says ring-worm is spreading among horses in that country, and ascribes it to the importation of American horses. When anything goes wrong in European or British politics, morals, or live stock, it is charged up against Americans. Just the same, ring-worm in horses is very uncommon in this country.

At a recent meeting of the board of directors of the Kentucky Horse Breeders' Association, held at Lexington, it was decided to double the Transylvania stake, making it worth \$10,000; also to increase the Futurity from \$16,000 to \$20,000, giving \$10,000 to the winner of the 3-year-old division. Maj. P. P. Johnston was again elected president of the association, and Horace W. Wilson was re-elected secretary.

The thoroughbred stallion Brilliant, for whom W. J. Owsley, Jr., Burkesville, Ky., paid \$1,500, recently met death in a peculiar manner. Mr. Owsley also owns the thoroughbred stallion Red Squirrel, purchased for \$2,500, and both stallions occupied separate box stalls. A few nights ago the door of Red Squirrel's stall was left unlocked by accident and the horse pushed it open, proceeded to the stall door of Brilliant, unfastened it with his teeth and a desperate fight ensued. Brilliant was killed, Red Squirrel choking him to death.—Chicago Horseman.

The 17-hand trotter Huse Holt, by Reno Defiance, recently reduced his record to 2:24½ in Texas, and his half-sister, Lady Reno, by Reno's Baby, trotted to a record of 2:24½ in her first race and was timed a quarter in 33 seconds. Reno's Baby is also by Reno Defiance, and he by Louis Napoleon, out of a dam by Fisk's Mambrino Chief. There are good reasons why Reno Defiance should prove a sire of great race horses.

The Philadelphia Record says: "Everybody connected with racing admits that the curse of the turf is the heat book. It has caused nearly all of the fraud unearthed, yet nothing is said about abolishing heat betting, because of the revenue derived from the bookmaker." The truth of that statement cannot be gainsaid. Heat-betting is the opportunity of the dishonest owner and the race-track gambler, and should be abolished. But associations are run to make money, and so long

as it pays them the public may continue to be swindled, and contests become a long drawn out farce.

The youngsters by Prodigal, 2:16; Directum, 2:05½, and Direct, 2:05½, that have sold in the recent combination sales, have made the best average prices of any consignments of young trotters since the boom days of speed in the '80's. A consignment of the get of Prodigal sold in New York for an average of \$1,500 per head and a contribution of young Directums made an average at a recent Lexington sale of over \$1,300 per head. There is no trouble realizing big prices for good colts if they show merit, but the day of fabulous prices for paper horses is numbered with the things of the past.

The stables of the Paris Omnibus company are situated on the Boulevard Bourbon, and quite close to the famous Bastille. The company has a stud of 850 horses, and the boxes comprise two galleries, and the various divisions contain accommodation for twenty-four horses. The stabling is perfect, from a sanitary point of view, and the animals are turned out thoroughly well groomed. Percherons, Boulonnais, ordinary Normandy, and American horses find a habitation there, and appear in splendid condition as they go from the Bastille to the Madeleine and vice versa. Each horse has 9 lbs. of oats, 9 lbs. of maize, 2½ lbs. of beans, and equal parts of cut hay and straw, making a total weight of 29 lbs. for daily nourishment. Dried peat or turf is used as litter to the depth of 14 inches. The health of the horses in these stables is all that can be desired.

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The American Cultivator, published at Boston, Mass., is responsible for the following:

There is a good reason why the Merino sheep should always be favorites in this section, for the hilly uplands which these sheep best thrive in are found here. Our winter climate, too, is just what this hardy sheep requires to make its wool of the best quality. When Merino sheep are taken from this section to Australia and New Zealand, after a time the wool deteriorates, being more or less mixed with hair. This is technically called "jar," and it is a serious evil in the growing of the finest wool. The pure bred Merinos grown in Vermont produce wool free from "jar." It is this that makes a market for our best bred sheep at good prices, as they are needed to prevent the deterioration of this breed of sheep when taken to climates not adapted to them. The Merino is a favorite in Australia, as it will thrive better than coarse-wooled sheep in the large flocks kept by sheep-growers in that vast country.

Perhaps there never was an instance where a journal managed to get the facts so thoroughly transposed as in the above paragraph. The qualities of American and Australian Merino wools are so well known to everyone who has made any study of them, that we are very much surprised to see our generally correct cotemporary fall into such an error. As a matter of fact, the American Merino, as bred in New England, New York and Michigan for the past thirty years, has always grown more or less "jarre," or coarse hair, over the top of his folds and wrinkles. The majority of the lambs, and a large number of the ewes, developed this characteristic in a greater or lesser degree. It was one of the objections urged against American Merinos on their first introduction into Australia, and it required some years to convince flock owners that a little "jarre" did no harm to a good sheep or his progeny. That as a matter of fact it was generally associated with a vigorous constitution and a heavy well set fleece. Some years ago, while visiting the Hon. W. G. Markham, of Avon, N. Y., one of the earliest movers in the work of introducing the American Merino into Australia, he spoke of the trouble he encountered in convincing Australian flock-masters that such a characteristic would not harm the quality of the fleeces of their Merinos. He read to us two articles which he prepared and had printed in a Sydney newspaper, taking that ground, and explaining why Americans did not object to a little "jarre" on their own stock rams. Some years afterwards, when Mr. McCaughey, the owner of the largest flocks in Australia, came to the United States to secure a number of American Merinos with which to improve the wool-growing qualities of his sheep, he took a number of rams carrying more or less "jarre," although he preferred, he said, to have the fleece as even over the folds and wrinkles as possible. Within a few years some breeders have worked towards this point, and have made more or less change in their flocks in this particular. We may mention the Barton, Clark and Bissell flocks in Vermont, the Martin and Ray flocks in New York, and the A. A. Wood flock in this State, as examples; but of course there are many others in the three states mentioned. The only family of the Merino bred in the United States which are entirely free from "jarre" in their fleeces are the delaines, and they are without folds or wrinkles.

When we come to examine the fleeces of Australian Merinos we find them to be essentially the same as the delaine families in the United States. If they have had no American Merino blood bred into them the fleeces are longer stapled than the latter, not so dense, and very even in quality. This cannot be seen by examining the Australian wools imported into this country, for the very good reason that only the best portions of each fleece are imported. But anyone who had an opportunity of examining the whole fleeces of Australian wool shown at the World's Fair can verify the truth of these statements.

American sheep imported into Australia or New Zealand do not have their fleeces deteriorate or become hairy, nor do the native Merinos of those countries produce hairy wools. Australian and New Zealand Merino wools are of as fine quality as any produced in the

world. American sheep are used to add to the density and weight of their fleeces, not to improve the quality. If the editor of the Cultivator will go to any wool house in Boston where Australian wools are handled, he can easily convince himself of the high quality of these wools.

As another interesting point, we will call the attention of the Cultivator to the fact that at the World's Fair at Chicago, with Vermont Merinos present in large numbers, two Michigan breeders carried off the bulk of the awards, and on sheep bred by themselves. The Vermont Merinos were not in the same class as those bred in Michigan. An examination of the awards will show this to be true.

CARE AND MANAGEMENT OF SHEEP.

At the recent meeting of the Illinois Stock-Breeders' Association, Jacob Zeigler, of that state, read a paper on this subject, and we give some portions of it which contain suggestions which some of our readers may find of interest:

In sheep husbandry there is one thing that must be observed and not overlooked, and that is thrift. Thrift means health, gain in quality, quantity and productiveness, hence profit, and profit is what we are after. It should always be the object of a flock-master to keep his sheep in a thriving condition. The quality of the wool, as well as its quantity and the general productiveness of the flock, demand this system.

Now, the question is: What are the essentials to thrift? I will say good feed, water, shelter and close attention of the shepherd. It is the worst possible practice to allow the sheep to fall away in flesh as the grass fails in the autumn. The increasing wool conceals the shrinking carcass, much to the disappointment of the careless flock-master. Better confine them in the yard than to allow them to ramble about in some field in search of food, which furnishes a little green feed, but too light to be of any real value.

For winter fodder there is nothing better than fine early cut clover, cut when in bloom and well cured. Hay from old meadows, consisting of a variety of grasses is equally good. Sowed or thickly drilled corn, for fodder, cut and well shocked in good season, is also a splendid feed. Good corn stover is a good and cheap feed. When fed in the yard on snow, frozen or dry ground, it makes a fine dry yard besides the feed. A feed of bright oats straw two or three times a week can be fed to a good advantage. It adds to the variety of feed of which sheep are so fond, besides the leaving of the straw and stocks makes a splendid yard and a good absorbent of the liquid manure; in fact, the only way in which this valuable manure can be saved.

Bright sheaf oats fed once or twice a week in racks is also a splendid feed. It answers for both grain and fodder, and saves the expense of threshing, which is quite an item. For thrift, clean water is very important to have in the yard. It is a mistaken idea that sheep do not need water. In August and September of 1894 I had 150 ewes with that many lambs in a pasture (and no other stock), and they drank a trough of water every day that held 210 gallons, nearly 1½ gallons average per ewe and lamb. I find if sheep have free access to water they do not drink so much at a time but often, and drink as much on dry feed in winter as on grass in summer. They can, however, go longer and do better without water than other stock, but thrive much better with it.

Shelter is very necessary to thrift. It is the first necessity in providing for wintering sheep successfully in this latitude. Fine wool sheep will bear exposure better than any other kind of sheep. The open fleece of the large mutton breeds parts on the back when wet and admits the water, which completely drenches the animal so that its abundant fleece is no longer a protection from cold. Economy in feeding also demands shelter, as not only less food is required, but is better preserved from waste. Water-soaked hay, or that which is in any way soiled, is always rejected. Sheep is the cleanest animal on our farm. It will not eat or drink that which is in any way soiled or out of a dirty trough unless forced to. (Hence mutton is the cleanest, sweetest and healthiest meat we can eat.) Shelter, therefore, is not only healthful and grateful to sheep, but also profitable to its owner. It is not necessary to build expensive buildings for

shelter. Open sheds facing to the south or east, as location of ground may be, boarded up on the back and ends and roofed over with common lumber, with hay racks built against the back under the shed, make a good and cheap shed. Straw may be used for the roof and siding of a shed instead of lumber. It will be cheaper, but not lasting. For lambs, however, I prefer a closed house with large double doors on the east or south of the building, and left open except in storms or rainy weather, then shut them in, as they do not crowd themselves in shelter like old sheep, and they do better in a closed shed, however crowded, than in a roomy, stormy outdoors.

For thrift keep them well tagged; feed and water at regular hours twice a day; let them have free access to salt. No other animals except small calves and pigs should be allowed in the yard with the sheep; they do well and do no harm, but the losses by the horns of steers and heels of colts more than balance any supposed gain.

Sheep suffer from the hot sun, and should, therefore, be supplied with good shade in summer. You can never tame a sheep by catching it by its wool. The more it struggles the more you hurt it. Catch it under the throat or by the hind leg.

Keep none but the best of whatever breed you have; they will pay when poor ones will lose.

HOW MANY SHEEP FOR 104 ACRES?

A farmer, writing from Gratiot county, Mich., lays his situation before me, and asks the above question. He has 16 acres of woodland that furnishes considerable pasture. His farming land is divided into three 24-acre fields that are rotated in corn, wheat and clover. The remaining 16 acres of tillable land is divided into two-acre lots that can be sown to successive pasture crops as rye, rape, etc. He does not wish to change his rotation. He wants to keep two sows and their offspring, one cow, and a team. He also asks what breed of sheep to keep that his lambs may weigh 100 lbs. at 8 to 9 months of age.

The number that may be kept will depend upon the breed somewhat. The weight indicated for the lambs at the age given limits the choice of breeds to the larger mutton breeds. The Lincoln is very popular in Michigan, will do well under the conditions that this farm offers, and will come as nearly meeting the requirements mentioned as any that I am acquainted with.

The number of acres in a farm tells only one-half regarding its probable produce. I am having it impressed upon me more and more that some acres are worth just twice as much as others. But it takes above the average of land to make corn, wheat and clover paying crops. With the amount of corn and clover raised more sheep can be wintered than summered, unless much labor is given to growing special forage crops. If the two-acre lots are fenced so as to be available for pasturing, sowing them to rye, oats and peas, rape, and probably sorghum, will greatly increase the summer feed.

I should start with 50 Lincoln ewes, increasing the number as conditions warranted. I think twice or even three times as many might be kept. The woods pasture is a very indefinite quantity and would vary greatly with the years, almost directly with the rainfall, if normally distributed. It should support 50 ewes and their lambs, provided the lambs were fed, until the clover aftermath is ready for the lambs, when they should be weaned. I should not hesitate to pasture the young clover should there be a rank growth, and I would have such

if the rainfall was sufficient. If it is desired that no feed be bought, I should sow four acres to oats or barley for grain to feed the lambs. If the proceeds of the wheat crop in part were turned into bran and oats so that all the 16 acres might be used for forage crops, the number could be largely increased. With the limited amount of midsummer pasturage, it would be better to have the lambs dropped in the fall—September. They could then be sold at any time from April to June. Or better still, have them weaned in November and December, force them for ten weeks, dress and send to New York. If it is preferred to have the lambs weaned at the usual time, try to rent some pasture so that as many may be kept as the corn and clover of the farm will supply.

Ohio.

H. P. MILLER.

FLOCKS AND FLEECES.

The annual meeting of the National Shropshire Record Association will be held at the Hudson House, Lansing, Mich., December 20th, 1898, at 7:30 o'clock p. m. An interesting program is being prepared. S. J. Weber, Middleville, Mich., is secretary of the Association.

It is very doubtful if the market for sheep and lambs will show much improvement within the next two or three weeks, and a further decline may take place owing to the heavy receipts and the decline in the foreign demand. While prices are low will be a good time to purchase feeders, as the market for good stock is nearly sure to show considerable improvement before spring.

Sheepmen should make it a point to attend the meeting of the State Associations at Lansing, beginning Tuesday morning, December 20th. A comparison of views of representatives of the different breeds regarding the sale of stock, methods and rates of shipping, and means to induce purchasers from other states to come to Michigan for what they want, could be made a very interesting and valuable feature of the joint meeting.

A dispatch from St. Paul last week says that several large commission firms, acting with prominent millers, have secured a corner on wheat screenings, and control all this product in the northwest. They have already raised the price per ton from \$5 to \$8.50, making it impracticable for western ranchers to send their sheep to St. Paul to be fed during the winter months. Over 100,000 sheep have been diverted this month to the corn belt in Iowa and Nebraska instead of being sent here for their winter feeding. This feeding business has been built up in the last half dozen years. As many as 400,000 sheep have been wintered here in one season.

Please give to some friend the extra copy sent you and ask him to subscribe for The Michigan Farmer at 60 cents a year.

BREEDERS' DIRECTORY.

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Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—E. J. Cook, Owosso.
Vice-President—Mrs. E. L. Lockwood, Petersburg.
Secretary-Treasurer—C. M. Pierce, Elva.
Directors—W. H. Howlett, Dansville; C. J. Phelps, Damon; F. M. Whelan, Vernon; A. L. Landon, Springport; H. Garnt, Highland; A. P. Green, Eaton Rapids.

All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elva, Mich.

THE STATE ASSOCIATION.

The largest and best meeting in the history of the State Association closed on Wednesday. Nearly two hundred delegates and more than a hundred visiting club members were in attendance. A complete report will be given in this department next week.

Officers for the ensuing year are: President, L. D. Watkins, of Manchester; vice-president, Mrs. D. M. Garner, of Davidsburg; secretary, A. B. Cook, of Owosso; directors for three years, C. S. Johnson, of Vassar, and Myron Crafts, of Jackson.

THE EDITING OF THE CLUB REPORTS.

It has been a source of great satisfaction to the editor of this department that the corresponding secretaries of the local clubs have so good-naturedly accepted the severe condensation of their reports made necessary by the greatly increased number of clubs regularly reporting. We are not unmindful of the fact that we frequently almost completely destroy the literary merit of most excellent reports by this forced condensation. No one regrets this fact more than ourselves. However, it is a matter for sincere congratulation that the older clubs have to crowd a little closer in order that the new comers may be given room. We feel assured that in the future, as in the past, nothing but good nature will be manifested at this overcrowding which results solely from the vigorous and healthy growth of the farmers' club movement.

ARE FARMERS' CLUBS TRULY BENEFICIAL?

L. I. BROMLEY.

Not for the purpose of adverse criticism, not that we may discover some possible defect in the farmers' clubs, but rather in a spirit of friendliness let us find a fitting answer to the question: If I give to the club my support and encouragement, what measure of good will come to me and mine?

Could we analyze the forces that have brought to the farmer a higher and a nobler life, could we illuminate the vast area upon which the elevating influences of the club have fallen and penetrate the privacy of countless homes where better thoughts, nobler ambitions and a happier atmosphere have succeeded apathy, would we not find these blessings directly traceable to the advent of the farmers' club?

Is it good for the spirit of progress to enter an apathetic home? Is it good to be inspired with an ardent desire for the improvement of self, of loved ones and of friends? Is it good to give to a mind that needs only an awakening a stimulus of intellectual food which shall make that mind a blessing and a pleasure to its possessor? Is it good to feel that through your loyalty to your club you have aided in bringing about this wonderful transfiguration in the status of the farmer, elevating him from one of the most impotent to one of the most formidable political powers in the State? If these things are good, and if they are the result of organization and club work, then it naturally follows that being a club member this good must come to you and yours.

There is a wide difference between being blessed and being unblessed, between a farmers' club community and a people who have not yet risen to the possibilities of this blessedness. Here is a community unblessed. There are people here ambitious to better themselves by imparting a portion at least of the knowledge they possess; yet being deprived of the opportunity the individual is lost sight of in the one case and the community in the other.

Line fences are often the boundaries between families and each family

seems interested only in what lies within the enclosure. This is a barrier to progress. Yearly visits are the chief sources of social intercourse, and it is a deplorable fact that in this community there are people who did they know each other would find congeniality and pleasure in the acquaintanceship. And yet they have lived near neighbors, perhaps from year to year, as widely separated as the differences of the poles could make them. Most of all there is a dullness in this community amounting almost to stagnation. The old ruts are plainly to be seen and the inhabitants travel in them.

This other community glories in its club. It is the township's drawing room, atheneum and vantage ground. Here all enmities are healed, all cooling friendships warmed back to life. None are strangers. The toddling child, the youth and maiden, the robust man and woman and the aged, all find in the entertainments at the club meetings something to interest and improve them. Here no religious creed, no political faith is recognized. All work for the common good, and through its connection with the State Association of Farmers' Clubs each local club wields a power that is impressively recognized in all deliberations that affect the farm for weal or for woe.

Perhaps some misanthropic club member may question the good the farmers' clubs are doing, but no ambitious man or woman when once electrified with the consciousness of what this unity of action means, can even intimate that the farmers' clubs are not doing a grand and noble work or that we are not happier and better for their advent among us.

REPORTS FROM LOCAL CLUBS.

MAPLE RIVER FARMERS' CLUB.

Last regular meeting of club was held Thanksgiving day at the home of Mr. and Mrs. M. H. Seeley. It has always been the custom of Maple River club to hold its regular November meeting on Thanksgiving at the home of a member; the one whose name comes next in the regular order. This one, I believe, is the twelfth Thanksgiving celebrated in this way. In former years it has been the custom to have a regular program and conduct affairs as at any other meeting, but this time, with the exception of the transaction of the necessary business, the entire day was given up to social enjoyment. Delegates elected to the State Association, P. B. Reynolds and R. R. Seeley. Next meeting with Mr. and Mrs. C. H. H. Payne, Willowdale Farm, December 29.

Shiawassee Co.

C. P. REYNOLDS.

OLIVE BRANCH FARMERS' CLUB.

About forty-five were present at the November meeting with Mr. and Mrs. D. M. Garner, among them several from White Lake and Rose clubs. Delegates to County Association reported good progress. Topic for discussion: In what way can our club be made of more benefit to us? With no disposition to criticize unfavorably the following suggestions were thrown out: Spend fifteen to twenty minutes reading from some recent notable book; let the questions discussed take a broader range; make the club a parliamentary school by conducting its business on strictly parliamentary rules; all the members be prepared to take part; be prompt and punctual; be present if on the program; ladies assist in the discussion; a feeling of greater responsibility on the part of the program committee; have more music; have leaders on both sides of the discussions and choose sides as in debating clubs; have a scrap lag. Next meeting with Mr. and Mrs. D. D. Hadley, Dec. 17.

Oakland Co.

REPORTER

IDA AND RAISINVILLE FARMERS' CLUB. A goodly number of members and friends met with us at the home of Mr. and Mrs. John Kemerling, Nov. 25. A well-rendered song by our new director and assistants opened the exercises. President Nichols opened the discussion of "The Sugar Beet Industry." More money is sent out of our country every year for sugar than all our grain exports bring to us. We should produce it all at home. He had grown a trial acre for the Experiment Station under unfavorable conditions; ground not very well prepared; soil one-third black clay loam, yellow sand and gravelly clay; cropped three previous years with strawberries, potatoes and corn; no fertilizer for beet crop; dragged three times; seed sown with grain drill 18 to 20 inches apart, too close for horse cultivation with tools on hand; gave 60 hours' hand hoeing and 65 thinning; crop sown first

week in May and gathered Nov. 3, 4, 5, with 70 hours' labor; estimated at 20c per hour for man and team and 12c for man alone. Total cost, \$25.44. Yield, 28,080 lbs., 14.28 per cent sugar, 85 per cent purity. Discussion brought out the following facts: Grow quicker and stand better on clay than sand, where a rust fungus seems more likely to develop; Bay City farmers pay no 50c royalty for location of plant. Mr. and Mrs. Nichols were elected delegates to the State Association. The next meeting will be with the n Dec. 30. It being Ladies' Day, the topic will be "Of What Do Woman's Rights Consist?"

Monroe Co.

J. W. M., Cor. Sec.

NORVELL FARMERS' CLUB.

At a meeting with B. R. Tracy the club voted against county ownership of abstract books. The work of the State Association was discussed. A. R. Palmer would like to see the Torrens land tenure law agitated. Thought the efforts should be continued along the same two lines of influencing legislation and selecting topics for discussion by the local clubs. W. R. Mount favored vigorous efforts in behalf of the County Salaries and Atkinson bills. The club seemed a unit in favor of these two bills. T. B. Halliday hoped the association would endorse the decision of the Supreme Court in the case of Beck vs. The Teamsters' Union. In answering the question, What shall be done with corn stubble ground? L. D. Watkins said he had settled down to one single practice, seeding to wheat with a one-horse seeder, sowing clover in the spring. He also had great success sowing clover alone in the spring. Several members would sow rye and plow in if they did not sow wheat. The leading members of the club were opposed to the annexation of the Philippines.

Jackson Co.

A. R. PALMER, Sec.

CONCORD FARMERS' CLUB.

Club met at the home of Mr. and Mrs. E. S. Wilcox. The Union Club meeting was announced for Jan. 25, at the village of Concord. Club voted to order the traveling library, and Rev. W. H. Hoffman was elected librarian to take charge of it. Carl Morehouse and Mrs. Wm. Bartell were elected delegates to the State Association. Miss Millie Hungerford read a very interesting essay on "The Benefits to be Derived from Farmers' Clubs."

Jackson Co.

MRS. MAGGIE BARTELL, Reporter.

BERLIN FARMERS' CLUB.

Six members were added at the October meeting. The November meeting was held with Mr. and Mrs. Jones with an overflowing house. The program was of a literary nature, consisting of readings and recitations. Food for thought for many a weary homemaker was given in Mrs. L. Hulbert's paper on "Don't Worry." Mr. and Miss Gould entertain the next meeting.

St. Clair Co.

MRS. H. L. IVES, Cor. Sec.

OAK GROVE FARMERS' CLUB.

Mr. and Mrs. N. Wilson entertained the November club. Two new members were added. A. Strouch, in a talk on Road Making, favored the road grader, then it can be drained. If district owned a stone crusher the farmers could improve the roads and clear the fields and fence corners of stones at the same time. Mrs. F. Strouch gave a good paper on "Does Wealth Tend to Elevate the Human Character?" Yes, with some. With others it is used to elevate in society, but not in character. Wealth is all right, but should not be made an idol of. Riches are more often a stronghold in imagination than in fact. They cannot buy honors nor freshness of heart, neither are they necessary to confer happiness. Happiness depends on disposition, not riches. The following officers were elected: President, A. Strouch; Vice-President, Mrs. Wm. Cole; Chaplain, Mrs. J. Parsons; Secretary, May Ferris; Corresponding Secretary, Mrs. Frank Strouch; Treasurer, J. McBride.

Shiawassee Co.

REPORTER.

HILLSDALE-LENAAWEE HORTICULTURAL SOCIETY.

Society was entertained by Mr. and Mrs. S. A. Vankirk in November. Forty conveyances from all points of the compass, some coming sixteen miles, brought a large number to the meeting. Sociability and a general good time were the marked features of the day. One of our veteran commercial growers, L. Beal, presented a discourse on "Growing and Marketing Peaches."

On Dec. 1, at the meeting with Mr. and Mrs. Henry Hawkins, the topic, "Our Milk Patronage, Shall it go to

the creamery, cheese factory or home dairy?" was opened by Mr. Strong. Discussion showed that butter factories where a separator is used are preferable to creameries. Many favored the cheese factory. Others, where a few cows are kept, prefer the home dairy. "Which is preferable, taking work and worry into account, the large or the small farm?" was discussed by S. A. Vankirk. It all depends upon capacity for management. Success depends upon the farmer and his wife. Personally favored the large farm. Rev. Wellwood, speaking on "The training and education of boys," believed in heredity, thought even a college education wasted upon some, advised training against the development of selfishness from very infancy. Boys ought to have good educational advantages and should be trained to think well of the farm. He commended the Agricultural College. Would apply Bible doctrine in the formation of character.

An original patriotic song, "Old Glory," words by Orin O'Harrow, music by Prof. Frank Haynes, was sung by the Professor and heartily applauded. Officers for ensuing year: Pres., A. C. Weed; Sec. and Treas., J. H. Vandervoort; Cor. Sec., C. C. Fuller. Delegates to State Association, J. H. Vandervoort and wife. January meeting with Mr. and Mrs. L. Chase.

Lenawee Co. ORIN O'HARROW, Reporter.

GREEN OAK FARMERS' CLUB.

There was a large attendance at the November meeting, with Mr. and Mrs. H. L. Doane, the 17th ult. Delegates to the State Association, J. W. Edgar and W. W. Hooker. Next club with Mr. and Mrs. G. Musch, Dec. 22.

MRS. LEM POTTER, Cor. Sec.

Livingston Co.

DEERFIELD FARMERS' CLUB.

Club met at the residence of Thos. Hogg, Nov. 17. Topic, "The most practical solution of the railroad taxation problem." It was thought that since farmers and business men are taxed upon the valuation of their property, railroads should be likewise dealt with, instead of being taxed upon their earnings. Farmers, if taxed on earnings, would not be taxed much some years. John D. Gulick was elected delegate to the State Association. "Reading in the farm home and how to make it most profitable" was led by Mrs. F. N. Boyden, who advocated reading aloud to the family and care in selection of matter. The musical part of the program showed that the farmers' club is bringing out talents that have been dormant for many years.

Isabella Co. N. V. COOMER, Cor. Sec.

ROSE FARMERS' CLUB.

One of our most successful meetings occurred at the home of Pres. J. I. Cole, Nov. 12. J. I. Cole and J. T. Pomfret were elected delegates to the County Association, and Mr. and Mrs. J. T. Pomfret to the State Association. The question, "What shall we do with islands acquired through war with Spain?" created a lively discussion. The sentiment of the club was against retaining the Philippines or expansion of territory in the eastern hemisphere.

We appreciate the efforts of The Michigan Farmer in creating enthusiasm and strengthening the efforts of farmers' clubs throughout the State.

MRS. J. T. POMFRET, Cor. Sec.

Oakland Co.

FENTON AND ARGENTINE FARMERS' CLUB.

Our club was entertained by Mr. and Mrs. Geo. Kelly, Dec. 3. This being the regular annual business meeting no regular program was carried out. Officers for the ensuing year were elected. Our president, M. E. Leonard, was elected delegate to the State Association, with M. L. C. Laing, alternate. Next meeting with Mr. and Mrs. Byron Hopkins, Argentine.

Genesee Co.

REPORTER.

VASSAR FARMERS' CLUB.

November meeting held with Mr. and Mrs. U. S. Lewis. The following officers were elected: Pres., W. A. Livingston; Vice-Pres., Geo. DeGraff; Rec. and Cor. Sec., Mrs. M. L. Livingston; Treas., Mrs. Helen L. Green. Delegates to State Association, W. T. Lewis and C. S. Johnson. An article, "What the Agricultural College has done," was read by Mrs. Mulholland. C. S. Johnson spoke in the highest terms of the College, as did also Prof. Forbes, a teacher of large experience. He thought if farmers wished to send their children where they would receive a thorough education and at the same time receive thorough discipline and be free from the temptations which surround the University they could not do better than to send them to the Agricultural College. Mrs. Green said her son was there and she could not say

enough in favor of the institution. The Professor gave a talk on "Literature in the Home," and spoke highly in that connection of the H. Parmelee Traveling Library. He advised all who could to avail themselves of its advantages. Next club with Mr. and Mrs. Peter Loranger.

Tuscola Co. M. L. L., Cor. Sec.
SALEM FARMERS' CLUB.

Annual meeting of club occurred Dec. 2, at home of Mr. and Mrs. Harry Clark. More than 100 were present. Four new members received. An interesting program was carried out. Question taken over from last month: Rate of interest received on money invested in farms and farm products. In other words, at present prices received, does farming pay? Quite a difference of opinion prevailed, both for and against. E. J. Walker, after carefully balancing his accounts for the year, claimed to have received over 11 per cent on the money invested. This high rate, however, was largely due to a fine crop of peaches marketed at good prices. The election of officers resulted in retaining our very efficient president, Henry W. Smith. James Murray and E. T. Walker were elected delegates to the State Association. Next meeting, Jan. 1, at the home of Mr. and Mrs. T. Atchinson.

Washtenaw Co. A. W. T., Cor. Sec.
LIBERTY FARMERS' CLUB.

The December meeting was entertained by Mr. and Mrs. Delos Smith. The Association question was discussed by Messrs. Vicary, Hammond, Edwards, Spier and others. They spoke of the work which has already been accomplished through the Association and of that which is proposed for the coming year. Through the Association the wishes of the farmers will be heard. The presidents of nearly all the state institutions are to be present at this meeting to present their needs and ask the farmers' influence. They want their vote. If the farmers' movement did not amount to anything they would not be there. Mr. Spier said he attended the meeting last year, was all around among the delegates, bound to get acquainted, and did not smell a single intoxicated breath while there. Alonzo Vicary and R. D. M. Edwards were elected delegates, with Mrs. B. W. Hill and J. D. Crispell alternates.

Jackson Co. MRS. J. D. CRISPELL, Reporter.

WHITE LAKE FARMERS' CLUB.

Club met at home of Mr. and Mrs. James Cuthbert, Dec. 3, with a large attendance. After report of delegates to County Association the club voted to join the County Club. Officers elected for ensuing year: Pres., Joseph Jackson; Sec., Mrs. Josephine Jackson; Cor. Sec., W. E. Clark; Treas., J. F. Beaumont. The following questions were discussed: Has the policy of the government in opening up the lands for settlement not been detrimental? The general drift of the discussion was to the effect that the government had done wisely in thus providing opportunities for those without much means to improve their condition and at the same time the wealth and resources of the nation were accumulating. "The value and influence of good manners." They are the result of early training and management, and require line upon line and continued perseverance. It makes life so much more pleasant to hear words politely spoken, and people, particularly aged people, politely addressed and spoken about. "How should we improve the social standing of our neighborhood?" Intellectually by providing good schools for the young and encouraging their attendance and providing good libraries for the use of all. Morally by providing church privileges for all and encouraging as many as possible to attend and receive the benefit. Preserve the sanctity of the Sabbath, particularly prohibiting the use of firearms on that day. Especially is this true in the vicinity of our inland lakes. Next meeting, Jan. 7, at the home of Mr. and Mrs. E. Hathaway.

Oakland Co. J. J., Reporter.
CLYDE AND GRANT FARMERS' CLUB.

The Thanksgiving session of this club was largely attended and royally entertained by Mr. and Mrs. David Beard. A program of fine concert music and good readings, original and selected, was presented. David Beard was elected delegate to the State Association. A committee was appointed to prepare resolutions in favor of the Atkinson and Kimmis bills for presentation by the delegate to the Association. The work for the Christmas meeting of the club in December was placed in the hands of the young people. It was

resolved to ask School Commissioner Campbell to arrange a teachers' meeting in connection with the January club. December club the 28th inst., at the residence of J. W. Gardner.

St. Clair Co. MRS. O. MCKAY, Cor. Sec.
MEDINA FARMERS' CLUB.

On November 19 the club met at W. Poucher's. Little was done except to elect officers. John A. Poucher was elected delegate to the State Association.

Lenawee Co. R. H. ROGERS, Cor. Sec.
THE ARGONAUT.

Held the meeting of its twelfth birthday on the evening of December 1. At the annual election of officers Mrs. J. Richardson was elected corresponding secretary. Mrs. J. C. Dunham and Mrs. J. D. Hazen were elected delegates to the State Association. The club instructed the delegates to approve in full the Kimmis County Salaries bill or any measure presented for the reduction of taxation.

Oakland Co. COR. SEC.
SOUTHERN WASHTENAW FARMERS' CLUB.

November meeting at the residence of Mr. and Mrs. F. M. Palmer, who with Mr. and Mrs. Calhoun entertained the large company right royally. Mrs. Henion called forth many happy reminiscences of youthful frolics by her reading, "The Old Barn." After an outline of the Atkinson bill by Mr. Rawson a lengthy discussion followed, resulting in a vote in favor of the bill with only two dissenting. A motion declaring for equal taxation was carried unanimously. H. R. Palmer presented a brief outline of the Kimmis bill. The bill was afterward endorsed by a unanimous vote. Two new members were added. Messrs. George Rawson and Wm. Pease were elected delegates to the State Association.

Washtenaw Co. EVELYN SPAFORD, Reporter.

SOUTH LEONI FARMERS' CLUB.

Mrs. Mary Fallie entertained the December club. Officers were elected for ensuing year. The day of the monthly meeting was changed from Friday to Thursday to accommodate all religious denominations. Topic, "Tuberculosis." Our delegates to the State Association were instructed to join with other clubs like minded in petitioning the legislature to amend the law which allows only \$1 per head to the owners of cattle which had been killed under suspicion of tuberculosis but afterwards proved not diseased. Next meeting, January 5.

Jackson Co. REPORTER.

MUSEY UNION CLUB.

Club met at home of Wm. Roy, December 1. It being the annual meeting, officers were elected for the ensuing year. The Association topic was discussed by Messrs. Beebe, Foley and Sherrard, who agreed that club should send good delegates, but that they should be left free to act on their own judgment regarding the work to be done there. The club accepted an invitation from Daniel Foley to meet at his place with the Mount Salem and Wales clubs, December 29. Next meeting with S. Sherrard, February 2.

St. Clair Co. R. M. MATTESON, Cor. Sec.

LEROY AND ROSE FARMERS' CLUB.

The members of this club were entertained at the home of Mr. and Mrs. Frank Shields, December 1. Mr. Craig was elected delegate to the State Association. A good program was provided by the committee. The January meeting will be held with Mr. Oach.

Osceola Co. MRS. S. DAY, Cor. Sec.

SOUTH JACKSON FARMERS' CLUB.

The November meeting of this club convened at the home of Mr. and Mrs. John Kimmel. The chief topic of the day was the discussion of the Association question and matters pertaining thereto. This was warmly debated for a considerable length of time, each one showing a deep interest in the matter, all favoring the idea of sending delegates. The following delegates were elected by acclamation: Celia C. Hatch and Ambrose Crouch, with Mrs. J. Kimmel and C. Hammond, alternates. The annual meeting will be held the last day of the old year with Mr. and Mrs. Wm. Hutchings.

Jackson Co. CELIA C. HATCH, Sec.

THE FARMERS' SOCIAL CLUB.

Annual meeting was held at home of Mr. and Mrs. J. F. N. Bowen, December 7, with a goodly number present. After a chicken pie dinner the meeting was called to order. Officers elected for the ensuing year: President, R. B. Gillespie; vice-president, G. B. Garlinghouse; recording secretary and treasurer, Ora Bowen; corresponding secretary, Mrs. F. D. Rector. Delegate to the State Association, Miss Lena Gillespie. An interesting program fol-

lowed. Fred Rector and Mrs. O. B. Finch read papers relating to Mexico and G. B. Garlinghouse a selection pleading for more practical teaching of nature's laws in our district schools. O. B. Finch read some reasons for and against "Uniformity of text books." The short time given to the discussion brought out the majority as not in favor of the measure. Two new members were added to our list.

Lenawee Co. MRS. F. D. RECTOR, Cor. Sec.

TYRONE FARMERS' CLUB.

November meeting entertained by Mr. and Mrs. E. J. Wakeman. After the regular program the question, "Is the United States justified in holding volunteer soldiers, now that the war has closed?" was discussed. The general opinion was that they had a right to hold them for the two years they had enlisted for. The question of the improvement of our country roads was discussed to some extent and laid over to a future meeting. Delegates were elected to the State and County Associations.

Livingston Co. A. W. SMITH, Cor. Sec.

Please give to some friend the extra copy sent you and ask him to subscribe for The Michigan Farmer at 60 cents a year.

Veterinary Department.

CONDUCTED BY DR. W. C. FAIR.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case fully, also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private practice, and a fee of one dollar must accompany the letter.

Eczema.—Cow's hair came off in several spots and skin is rough. J. M., Salem, Mich.—Give one dram Fowler's solution three times a day in feed, and one ounce fluid extract sarsaparilla twice a day. Apply vaseline to sore parts of skin once a day.

Indigestion.—Cow calved Nov. 21st; seemed all right up to Dec. 1st, when she commenced throwing food from her mouth after chewing it. R. K., Royal Kelley, Mich.—Give one ounce bicarbonate soda and one ounce powdered charcoal in feed twice a day until she is well.

Indigestion.—Fever.—Fed horses millet and it made them sick; caused their eyes to get sore, and they lost appetite. R. A. L., Durand, Mich.—Feeding millet caused indigestion. A complete change of feed, plenty of vegetables and salt would help them. If one kind of food does not help them, change again and watch results.

Paralysis in Hind Quarters.—Sow had five pigs last August. Had been kept in yard and fed milk all summer. Soon lost flesh and use of hind quarters; is unable to rise; appetite good. M. B., Decatur, Mich.—Apply caustic balsam to back twice a week and give ten drops tincture nux vomica three times a day. Give two ounces castor oil twice a day until bowels act freely, then discontinue.

Fits.—Pigs three months old have fits. They will eat a little while then fall over backward. Reader, Grand Rapids, Mich.—Your pigs have parasitic bowel trouble. Give one teaspoonful of following mixture to each pig twice a day: Powdered charcoal, ginger, gentian, bicarbonate soda and powdered sulphate iron, equal parts by weight. Ingredients should be mixed thoroughly.

Indigestion — Worms.—Seven-year-old horse does not digest his food; appetite good; drinks excessive quantities of water; coat is rough. F. H., Belleville, Mich.—Give one tablespoonful of following mixture: Ground nux vomica, powdered sulphate iron, gentian and nitrate potash equal parts, three times a day in feed. Have teeth examined and if found abnormal see that they are put in proper order.

WANTED in every county to take orders for our complete line of High Grade Lubricating Oils and Greases from the Farmers, Threshers, Mills, etc., etc. We are an old established concern and can make lowest prices. We invite comparison. Write for full particulars.

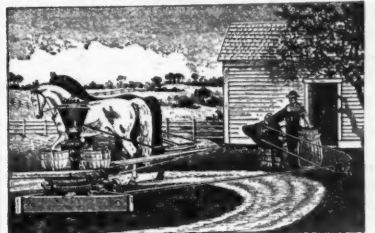
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pose of supplying the farmer, dairyman or stock feeder with a large capacity mill which would require the minimum of power. To do this they adopted the plan of making the burrs or grinding plates to operate in opposition to each other. They crush and grind ear corn and all kinds of small grain either single or mixed, fine or coarse. Write the Foss Mfg. Co. for circulars before buying a mill. You can surely find what you want in the mill line and at low prices.

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Horticultural.

ANSWER TO READER'S INQUIRY.

To the Editor of The Michigan Farmer.

Being a reader of this first-class farmers' journal, and seeing a description given of "Conditions of Garden" signed "Reader," if you would permit me space in your columns, I would like to give my judgment on his garden spot. If there should come a time this winter that the ground should be free from snow, I would sow on the one-eighth acre about 3 pecks of salt (muriate of soda). In the spring plow it, put it into good shape, and seed with mammoth clover. It will grow a large top, and the root grows large and penetrates deep into the ground. When it is grown to full size and in full bloom, put in the plow and chain and turn under the clover. You then have the proper chemicals for the development of a full crop. The clover sward is largely developed with ammonia, the chemical proper for the development of a fully-matured crop. My experience teaches me that hen manure and leaves as a green compost are an injury to the development of a fully-matured crop even on good soil.

S. S. STOUT.

For the Michigan Farmer.

DESTROY THE BAGWORMS!

Several times during the past summer I have found quince trees entirely defoliated by bagworms.

These interesting larvae are so called on account of their habit of protecting themselves with a tough cocoon-like casing of silk, somewhat resembling a bag.

The construction of this covering is a very painstaking and intricate process, but when completed, the worm is rewarded by being effectually concealed by the leaves and small twigs which are attached to the case. The worms carry these bags over them in an upright position when feeding, only the head and forepart protruding from beneath, as shown in the illustration.

Now, that the leaves have fallen from the deciduous trees, the bags may be plainly seen and readily destroyed by picking or pruning. The insect is really more of a pest upon shade trees than in the orchard, and is especially destructive to arbor vitae, red cedar, and conifers, upon which the bags quite closely resemble the cones.

The destruction of these bags in winter is one of the best methods of controlling this insect, but its value will hardly be appreciated without a slight knowledge of the history of its contents. If one of the larger bags be opened, which it will be somewhat difficult to do without a sharp knife, it will be found to contain the cast skin of a chrysalis or pupa, and in this a quantity of small, yellow eggs (Fig. 1, e), each of which is surrounded by a delicate coat of down.

About the middle of May these eggs hatch into small, but very industrious and active larvae, which at once start the construction of their cases. The first stage of these is shown at Fig. 1, g. As the worms feed and grow, they molt some four times, the cast skins and excrement being ejected through a small opening at the end of the bag. The young worms are poor travelers, but when full grown they instinctively migrate to other trees, else they must soon perish from lack of food. The mature worms are about one and one-fourth inches long (Fig. 1, a) with the abdomen of a light brown color and throat and head of a hard, horny texture, mottled with dark brown and white.

The bags of the worms which are to produce the female moths are fully twice the size of those becoming males. After securely binding the bag to a stout twig, the larva sheds its skin for the last time, and in so doing goes into a dormant stage known as the chrysalis or pupa. It is in this condition that a difference between the male and female insects themselves is first noticed, the female chrysalis being almost double the size of the male.

About three weeks after pupation, the adult moths throw off the pupal skin, the winged male moth to emerge from the bag and fly around in search of a mate, but the female, lacking both wings and legs, remaining in the bag solely to lay eggs for another generation. The male is a peculiar, black clear-winged moth, very rarely seen, and lives but a short time. A female is shown, greatly enlarged, at Fig. 2,

b. The manner in which the female escapes from the chrysalis (Fig. 2, a), and her subsequent history is most interesting. Pushing her way partly out of the chrysalis, she awaits the male with her head at the apex of the bag. After mating she again retires to the chrysalis, there deposits her eggs, and "with a last effort, forces her shrunken body out of the opening, drops exhausted to the ground, and perishes." The openings in the pupal case and at the end of the bag now close up and the eggs are left securely protected for the winter. Surely, no mother ever was more self-sacrificing for her young!

Though the bagworms are so well protected that insectivorous birds and predaceous insects are unable to prey

sponded on behalf of the society, and then President Morrill delivered his annual message. He said that horticulture had been in the dumps for a number of years, but now the whole State was becoming an orchard, and the mission of the society was never more plainly marked out. That was to teach caution, moderation and modern methods. The past year, he said, had demonstrated the fact that the small fruit business was overdone. Diseases, especially those of a fungous order, were increasing, and altogether there was a demand for thorough knowledge and careful application to the work on the part of horticulturists.

Secretary Reid followed with his annual report. The society was in a generally prosperous condition, except that

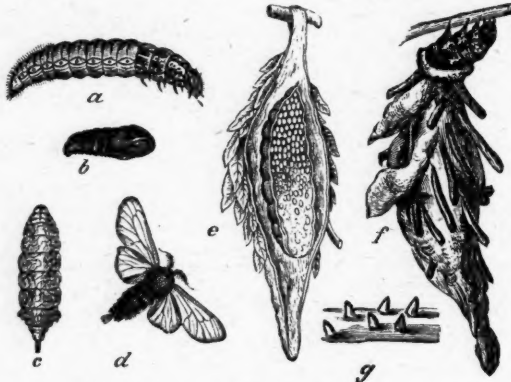


FIG. 1.

upon them, yet the little parasitic insects are able to attack them and quite commonly destroy large numbers. Among these six parasites, may be mentioned pimpla conquisitor, the chief parasite of the cotton worm.

As may be seen from the above description, if the bags are destroyed in winter, there will be no eggs from which a succeeding brood may hatch, and if this be properly done there is little excuse for injury by this insect. It would be better to collect the bags and keep them in some enclosure away from the trees, than to burn them, for the young larvae will be unable to crawl again to the trees, and in this way the beneficial parasites will not be destroyed, but will emerge to continue their good work.

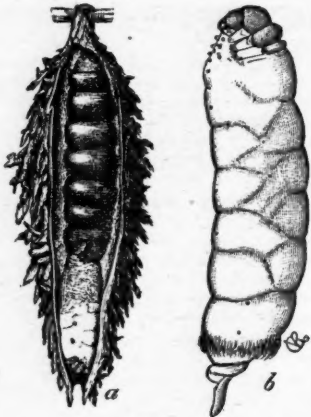


FIG. 2.

Spraying the trees with Paris green will destroy the worms while feeding, but if the trees be properly cleaned in winter, it will rarely be necessary to resort to such labor.

E. DWIGHT SANDERSON,
Maryland Agr'l. College, Nov. 15, 1898.

STATE HORTICULTURAL SOCIETY.

The annual meeting of the State Horticultural Society was held in Ann Arbor the past week—Tuesday, Wednesday and Thursday. Owing to delays caused by the snowstorm, the morning meeting on Tuesday had to be dispensed with. The attendance was not near as large as was expected, and was largely confined to veteran fruit-growers from the western counties of the State. Quite an attractive display of fruits and flowers was on exhibition in a separate hall.

President Roland Morrill called the meeting to order, and President Angell, of the University, welcomed the visitors to the city, and gave them the freedom of the great institution over which he presides. Referring to the good done by the men who are carrying on horticultural work, he said that it required intelligence and good taste to carry it on successfully. He spoke of a recent visit he had made to Damascus, but said he had seen just as beautiful a sight in the "peach belt" in western Michigan. Mr. Charles W. Garfield re-

there had been a falling off in the number of annual memberships. He said the local societies in the State showed little change, except the increased attention given by their members to the commercial features of the business. The literature of the society was in fair demand.

According to the report of Treasurer Slayton, there was a cash balance in the treasury of \$182.65. Receipts for the year were \$187.37, and disbursements \$4.72. The permanent fund of the society now amounts to \$2,786.28, a net increase of \$201.48.

Regent Dean, of Ann Arbor, gave a brief statement of what the University was doing in the work of practical horticulture, and Regent Lawton followed with a paper on "The Value of Education to the State." Mr. Lawton said that republican institutions must rely upon the youth of the country, and not upon guns and armor-plate. It was education, he said, that conquered at Manila, San Juan and Santiago. "We hear," he said, "of people complaining of taxes for education without considering the much greater cost of ignorance and the attendant evils. It is far wiser to support schools and universities, so that the youth of the State will become useful members of society, instead of providing asylums, jails and reformatories. The complaints against professional education are not well founded, for doctors, lawyers and others, who have received the best possible preparation, are most essential to the welfare of the State."

Then followed a discussion on the topic, "Why do the young men who go to the University leave the farms?" The final outcome of the discussion was rather lame, and practically left the question unanswered. Some gave it as their opinion that there was a growing tendency for men of means to leave commercial and professional life in the city and take up their residence in the country, which was not in any sense an answer to the question asked. President Morrill said he feared the fault was more with the farmer than with the higher education, for there were so many on the farm who were not big enough or broad enough to make the farm an attractive place. Hence he thought it quite natural for an ambitious boy to leave his country home for the city.

Prof. W. B. Barrows, of the Agricultural College, followed with a paper on "Plant Lice and Scale Insects," which he illustrated with stereopticon views.

Prof. A. B. Prescott, of the University, read a paper on "Fruit Acids," which he illustrated with experiments conducted by an assistant.

At the evening session papers were read by M. P. Hurlburt, of Detroit, on "Parks and their Uses;" "What are

Fruits?" by Prof. F. G. Newcombe, of the University; and "What Legislation should we have this Winter," by C. J. Monroe, of South Haven. Mr. Monroe advocated the enactment of a law which will prohibit the sale and shipment of diseased fruits entirely. He said Michigan fruits had been brought into disrepute in many instances because growers persist in sending out inferior fruit, which the nearness of their market permitted to be done. We think Mr. Monroe struck the most important point in the future of fruit-growing, and in no way overestimated the result of present methods on the business of fruit-growing. As to whether or not legislation will cure the evil complained of, is a question which can only be determined by a practical test. Even if such legislation should be enacted it should be reinforced by the active work of leading fruit-growers in educating others as to the results which will surely follow a continuance of practices which are both dishonest and unwise from the standpoint of profit to the grower.

Wednesday morning's session was held in Newberry Hall of the University, where the fruits and flowers entered in competition were displayed.

President Morrill first announced the committees on exhibits and resolutions. That on exhibits consisted of Messrs. Thomas Gunson, C. W. Garfield, W. W. Tracy and L. B. Rice; that on resolutions of Messrs. R. M. Kellogg, L. D. Watkins and S. B. Smith.

A change was made in the by-laws of the society so that the president and members of the executive committee should hereafter be eligible for only two terms of service.

When the election of officers for the ensuing year came up, a rather warm discussion took place over the question of whether the society represented the entire State or only the western portion of it. This was brought up because on the first ballot for president several votes were cast for a resident of Detroit, and the western members at once objected to having a resident of the eastern part of the State elected to the position. Finally C. J. Monroe, of South Haven, secured a majority of the votes cast, and was declared elected. For the position of secretary E. C. Reid was the only candidate, and was declared unanimously re-elected; and A. W. Slayton, of Grand Rapids, was also elected treasurer without opposition. For new members of the board of directors, Messrs. R. M. Kellogg, of Three Rivers, R. J. Coryell, of Detroit, and Thomas Dunston, of the Agricultural College, were chosen.

The question of where the next fall meeting of the society should be held was settled by the selection of Detroit.

Various members of the society complained of the light attendance of farmers at the sessions of the society, especially as many of them in the vicinity of Ann Arbor are largely engaged in fruit culture, and the question was frequently asked as to the cause of this indifference. We believe it to be the result of the society neglecting the eastern counties so long that farmers have lost interest in it. Its officers and members are nearly altogether confined to the western counties, and very naturally its meetings provoke little interest among horticulturists in the eastern section of the State.

At this session representative horticulturists from Illinois, Ohio and Ontario associations were present, and made short addresses, reporting what the horticulturists in those associations were doing. The society then took a recess until 4 p. m., to allow those present to visit the different departments of the University.

(Concluded next week.)

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For The Michigan Farmer.

MY IRRIGATION PLANT—LIQUID MANURE FOR THE GARDEN.

Every gardener appreciates the value of having water available for irrigation in times of drouth. If one depends on the usual rainfall, the best results will not always be obtained, for though he supplies to the plant all the food necessary, yet without water it remains in an insoluble condition in the soil. For several years a drouth in June has shortened my crop of strawberries about one-half of what it should have been. I therefore began to consider some plan of irrigation. My truck farm is well situated for the purpose, by having a large brook run through it, so as to divide it into two almost equal parts. The bed of this brook is from eight to ten feet below the garden surface. The question for me to decide was, how could I the most economically elevate this water to make it available for irrigating purposes. An engine was too expensive, and a windmill too uncertain, and I finally decided to use a hydraulic ram. One of the largest rams, with a fall in the drive-pipe of about six feet, was placed in the brook; near the ram and on the highest bank of the brook a large tank was built of pine planks, and at a height sufficient to carry the water all over the garden.

From this tank, iron pipes were laid in different directions over the garden on the surface of the ground. The pipe has hose attachments at every third coupling, where the water can be taken out and applied with a hose when it is wanted. The ram will elevate into the tank nearly 100 barrels of water in 24 hours. The water is usually distributed over the garden at night, and may be applied through a sprayer or allowed to run in a stream, as desired. I do not think this method of applying water with a hose the best one, as with surface irrigation the surface of the ground will sometimes bake. Sub-irrigation is better, and I hope sometime to substitute irrigating tiles. One object I had in building the water tank was to dissolve fertilizer in the water and feed it to the plants through the pipes. So far this plan has proved very satisfactory to me. One difficulty in putting manure directly in the tank is that it may clog the distributing pipes. This, however, may be overcome by building a slatted box in one end of the tank, putting the slats close enough together to hold in the manure, but letting the water in to carry out the plant food. Probably in using fine manure, such as poultry manure, it will be necessary to cover the receptacle with wire cloth. I think I see some advantages in the use of the tank for the application of chemical fertilizers in solution. The plan which I have in mind is to furnish the soil with potash and phosphoric acid in the form of ashes, muriate of potash, and superphosphates; then having dissolved nitrate of soda in the water, feed it to the plants through the pipes as they may need it.

If water for irrigation be taken from a tank, the tank should be made shallow and wide, so as to expose a large surface to the sun, by which means it will be warmed and can be used with much better results. This does away with the objection against irrigating from wells, that the water is too cold to apply directly to the plants. It is a great convenience to have water at hand to use when transplanting. I was formerly obliged to delay transplanting because of dry weather, but now with plenty of water for wetting the ground I am not obliged to wait for a rainy day, but can do the transplanting any time when ready. If after I have prepared the land, and marked it for the plants, it is too dry for setting them, the hose is attached to the pipes and water run in the rows. The plants are then set and a little dry soil drawn around them to keep the ground from baking. If dry weather continues, they are again watered in two or three days. By this means I never fail to make nearly all the plants live when set in the driest weather. If one has time, it pays to water the plants every two or three days after setting them, for two or three weeks after they are transplanted, unless there is plenty of rain. This will help them to form new roots and forward their growth. As plants are often set, they do not commence growing until several days after they are transplanted, and lose so much of the best part of the growing season. I have found it profitable to irrigate strawberries. I commence to irrigate them as soon as they commence to blossom, putting some stable manure in the tank a day or two before I begin.

The color of the foliage will soon show the effects, changing to a dark green, followed by a large growth of leaf and berry. When irrigating strawberries, I lay the iron pipes over the field about 100 feet apart.

Sometimes, when not using the manure water, I attach a revolving sprinkler to the end of the hose which is attached to the water pipe, and this will throw the water over several rods of ground; then, when it is thoroughly soaked, I move it to another place, and so on until the whole bed is irrigated. When applying liquid manure that may injure the foliage, I let the water run from the hose between the rows of plants. At the time of year when the irrigating is done, there is usually a man working in the field who attends to moving the hose. I have found in celery culture that its great need is water from the time the seed is sown until the plants are blanched for use. With water at hand I can give the seedbed, where the plants are grown, a good watering every night, which causes the seeds to germinate well. Then I have the water to use in transplanting the plants to the field, and water to keep them growing all the time.

Delaware Co., N. Y.

W. H. JENKINS.

The Dairy.

Conducted by J. H. Brown. Every reader of The Michigan Farmer, who is interested in dairy matters, is earnestly invited to frequently contribute to this department. Send all dairy correspondence to Battle Creek, Mich.

AS WINTER COMES ON.

"My cows are in the barn. They don't go out such days as this. One day of exposure to these raw winds and rain will take more out of cattle than you can put back in a week."

It was raining drearily out of the northeast, and there was a chill in the air which made an overcoat seem very comfortable. We were riding past a lot in which a herd of milch cows were vainly trying to get a bite of frosted grass and at the same time keep out the discomfort coming with the heavy fall storm. Some of the cows had given up the task of eating and were devoting their attention to the matter of keeping out the cold. Their rainbow-shaped backs, downward-bent heads and generally depressed appearance told how absolutely hopeless was the effort of these poor animals to ward off the wind and the rain.

My friend was right when he said that cattle thus exposed will lose in a few hours more than can be replaced in many days. We do not expect a stove to give us heat unless we put fuel into it. It takes about so much wood or coal to keep the iron warm. The surplus heat goes to make the room comfortable. So with the cow. When the fuel taken into the stomach is all consumed in the effort to keep warm, very little is left for the milk-pail. For this reason, the barn is the best place for the cow when the weather is bad. One fact must always be kept in mind by the farmer—the cow must be kept warm to do good work. A shivering cow is not a comfortable cow.

Battens are cheaper than hay. They last longer. The dollar spent for them will save hundreds of dollars in hay and grain. Before winter comes on stop up the cracks, and so save fodder, and put money into the butter-bowl. But while stopping the cracks do not forget that the stock needs ventilation. This may be furnished by the chutes through which hay is put down if there be a free connection with the cupola, or by means of air-shafts at the side or end of the stable. When not provided by either of these, by looking carefully to the windows we may furnish pure air in sufficient quantities to keep the stock healthy.

Calves are especially susceptible to the cold winds and storms of early winter, and to do well they must be sheltered very carefully. The calf of 1898 is the cow of 1899. The treatment given this year will determine the value of the animal twelve months hence.

Broome Co., N. Y.

E. L. VINCENT.

(In riding through the country this fall, and during the last two weeks, we find that farmers generally are keeping their dairy cattle better housed or sheltered than they did a few years ago.)

When a dairyman becomes convinced that more or less of the feed he has grown on his farm (which represents time, labor and money), is used by each exposed cow to warm up her

system before she can profitably make much milk, that dairyman is becoming truly "converted."—Ed.)

CREAM SEPARATORS.

A reader sends us circulars of two new cream separators, in the use of which water is mixed with the milk when strained, and the cream is raised within one to two hours. Our opinion of the merits of the devices is asked and as we have never seen them tested we could not give an intelligent opinion. The circulars and letter were forwarded to Mr. Scott, and his opinion follows:

In attempting to give an opinion as to the value of this rather new invention, I am aware that I must encounter the studied theory of the manufacturers. To my own knowledge there are three of them in existence, "with other counties yet to hear from."

I learn that they are being placed in the hands of a great many farmers. To give an opinion without practical points to sustain it, is not a fair way to meet an opponent, hence in this case, to sustain satisfactorily any conclusion, it must be done by comparing its work with other methods or systems of raising or separating cream from milk.

There are but two known methods for doing this, namely, by gravity or by centrifugal force. The former method has been the only known system until more recent years, and as yet we believe that more milk is set to be separated in that manner than any other way. The methods of securing best results by this system are various. Most farmers' wives still use the old-time pan setting, getting all sorts of results from it. We have known dairymen who have and do yet practice it to most excellent satisfaction by placing their shallow pans in a room that can be held at a temperature of 58 degrees for 36 hours, and who get the highest price for their butter; more than that, do not lose any more butter fat than a majority who use newer methods.

Some years ago the deep-setting pan came into general use and gave good satisfaction over the general pan setting, where manipulated right, by using plenty of cold water—the colder the better—to force rapid contraction of the water in the warm milk, which caused rapid dropping of the skim-milk and the floating of the butter globules, carrying with them a portion of casein and water.

This process had many devices in the form of creameries, using shotgun cans small in diameter but high so that the action of the cold water through the tin would be quick. The Cooley system was the only one that submerged its cans, left open at the top so that air might have free action over the warm milk and carry away the animal odor. This system we have used for years and consider it by far the best, aside from the centrifugal separator, that we have ever come in contact with. Yet it has faults and under some conditions will do the worst of work, in midsummer without ice.

As we understand, the cream separator in question is neither a shallow nor deep setting affair, but dependent upon the admixture of cold water with warm milk to do the work. To be better able to give the case an unbiased canvass, we went to a man who had purchased one and was using it in his home. It was setting near the stove covered up tight, with near six gallons of water, milk and cream in it. From appearances the amount of cream raised seemed to be very fair and both husband and wife said that they got much better results than from pan setting, but the husband said the skim-milk was not fit for calves. In fact he could not feed it to them as it scoured them awfully. The principle of this device, as I stated, is to use the cold water by spraying it into the milk, claiming that the cream will rise in one to two hours, and from our observation it had done so. We told the party using it that if the separator was set outside, with the cold air about it, the work would be still more perfect. We have tried the system ourselves frequently, with our Cooley, by placing a large quantity of cold water first in the can, then straining in the milk slowly, getting the best results by sub-

merging the cans but no better than by putting in the warm milk and submerging at once.

We found the skim-milk worthless, trashy stuff and worse than poison to our calves, and not extra pig feed. The claims made for it are that it saves washing. That is true. But when its agents claim it to be the best separator made we say no. It is cheap in one sense and not in another. The process compels one to pay for two gallons capacity for water as against one in any of the other processes of the gravity system.

While it may compare favorably with the other systems in securing the cream, the fact of practically losing the skim-milk as animal food would condemn it for our use, as we consider the pure skim-milk an invaluable factor on the farm. The only perfect method of separation is through the centrifugal separator. With it, the butter fat can be extracted almost perfectly at any season of the year, the warm skim-milk fed to calves and pigs to a very great advantage, and the cream placed in condition at once to make the best flavored butter. If cheapness alone is the matter in question, we should certainly use the shallow pan, next the Cooley or very similar system, then the centrifugal and lastly the separator in question, as the practical loss of the skim-milk would make it by far the most expensive of the lot.

If a farmer wants to try the system, get a six-gallon can with 5-inch glass and spicket at bottom, made at the tinners, and strain his milk through a tube to the bottom after the water is put in, all at a very small cost, and then see if he wants to invest in an \$8 can only to find that he has on his hands a high-priced "milk and water affair."

GEO. E. SCOTT.

(We have already warned some of our brother dairymen not to be taken in by this new (?) gravity system. It is not a "separation," and yet some are ready to believe it may be compared with the separators that use centrifugal force to extract the cream from warm whole milk.—Ed.)

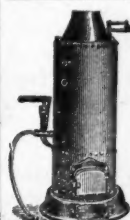


Out on the water in the moonlight. A more beautiful or romantic situation for a young man to tell the story of his love and ask the young woman of his choice to share his life cannot be imagined.

The courtship of a young couple may be ever so romantic and their married life be very unhappy. There are common sense considerations outside of love that have a world to do with the making of married happiness. One of the most important of these considerations is the good health of both parties to the sacred tie. The young man who is in the incipient stages of consumption commits a crime if he marries before he is restored to health. He condemns his wife to the life of a nurse and his children to early death, or lives of sickness and suffering. Dr. Pierce's Golden Medical Discovery cures 98 per cent. of all cases of consumption if taken in its earlier stages. This is its record established during the past thirty years. It is the great blood-maker, flesh-builder, nerve-tonic and general restorative.

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DETROIT, SATURDAY, DEC. 17, 1898.

This paper is entered at the Detroit Postoffice as second class matter.

Mr. L. Z. Leiter, who did so much a year ago to hold up the price of wheat, is reported to have gone into a milk trust in Chicago, which aims to control the milk supply of that city. The enterprise is capitalized at \$10,000,000. After milk has been sold for low prices until every rival has closed his shop and sold his wagons, the trust expects to regulate the price of milk on the price of butter. It will then retail for five or six cents, as the Elgin butter market may be up or down. To furnish pure milk to Chicago, stockholders declare, is one of the objects of the trust. It will make regulations for the farmers, furnish them the cans, and run the milk through a cleaner. The milk shippers regard the trust in a rather favorable light. They have been promised fair prices, based on the price of butter. It looks to us as if that "trust" would never live to grow up. There are too many farmers for the trust to handle, and when milk is at a paying price outsiders will be on hand to secure a share of the profits.

The San Francisco Call prints a description of what is undoubtedly the largest single field of wheat ever planted in the state if not the country. It covers 25,000 acres or 40 square miles and is one flat, almost level, plot of ground. If the day is clear every part of the field can be seen from every other part. There are no roads through the field, and every foot of the field will be made to yield wheat. Plowing and planting began about the middle of last July and will not be completed before the middle of winter, but the grain will all mature at about the same time, when will come the herculean task of harvesting it. The owner of the Clovis wheatfield, Mr. Clovis Cole, has to employ over 200 men, over 1,000 horses and a number of tons of big machinery. The entire harvesting will be done by machinery; cutting, threshing and even sacking and leaving the grain in rows in bags, will be done all in one operation. The time of the "good old times" and the hand sickle have indeed passed.

Please give to some friend the extra copy sent you and ask him to subscribe for The Michigan Farmer at 60 cents a year.

CLEANLINESS IN POLITICS.

Health Officer Gibbes, of this city, has been taking a look over the corridors and stairways of our City Hall, and the result of his observations has been given to the public through a communication to the Common Council, from which we take the following paragraphs:

"In the first place, the air throughout the corridors was charged with moisture and offensive odors arising from the condition of the floors and the mass of seething humanity congregated there, aggravated, of course, by the condition of the external atmosphere, which was filled with snow at intervals."

"On the first floor a large amount of snow had been carried in from the outside and deposited on the floor, where it had melted, and, in consequence, the whole floor was covered with a mixture of melted snow and expectoration. The second floor, which was the cleanest of the three, showed here and there tobacco juice and sputum in various stages of drying, which had been distributed impartially about the corridors."

"The third floor was the worst. Probably because the melted snow on the first floor had obscured matters. The woodenwork throughout the building is in a grimy condition, so that a knife will scrape off a greasy matter."

It may be thought by our readers that the city was saving money by not keeping her city hall clean. But we can assure them that the taxpayers are paying lavishly to keep that building in decent condition. According to the report of expenditures published in a Detroit daily by the Board of County Auditors, the county pays, for its share of keeping the city hall clean, the sum of \$22,000. This amount is distributed among 24 janitors, who receive \$17,578, and eight janitresses who draw nearly \$5,000 annually. This is the county's proportion. What the city pays for keeping its share of the building clean we do not know. Probably every alderman has a janitor or a janitress. Yet the building is so foul that it is a menace to the health of every one who is obliged to enter it.

As a sample of how a building can be kept clean at a moderate expenditure, we call attention to the State Capitol at Lansing. That building is double the size of the Detroit City Hall, yet it is kept in beautiful order, clean and wholesome, at one-third what the taxpayers of Wayne County and the City of Detroit have to pay, and have only a dirty, foul smelling building to show for their expenditures.

What is the reason for this great expenditure of the people's money, and the very light results realized therefrom? Simply politics. For eight years the city and county "bosses" have been appointing their "workers" to positions as janitors—not to help keep the building clean, but so they can spend their time and the people's money around the saloons, gambling places and other questionable resorts, working up the political booms of their respective bosses. This is the system inaugurated under the head of "reform," in which the "bosses" loudly abuse millionaires, corporations and monopolies, while they are engaged in robbing the taxpayers. There is nothing new in the method employed by the political boss. In ancient Greece and Rome the demagogue, as he was then known, maintained himself in power and became rich by the same means. He simply abused the prosperous and thus secured the support of the poorer classes and parasites. They were just as shrewd, dishonest and unscrupulous as the modern political boss, and just as great a curse to their country.

The Central Michigan Poultry, Pigeon and Pet Stock Association will hold its fifth annual exhibition at Lansing, December 26 to 30. All exhibits must be in place by 10 a. m. on the 27th. Secretary C. H. Crane, of Lansing, will furnish further particulars.

BRIDGING THE DETROIT RIVER.

The perennial proposition to build a bridge over the Detroit River opposite this city, in the interests of the various lines of railways with eastern connections, is again before Congress. It seems very singular that anyone with a regard to the future welfare of Detroit would favor such a scheme. The only ones who would profit by the building of such a bridge would be the through transportation lines between the east and west. The business interests of this city would be affected very materially, and to their detriment. That river practically makes Detroit a railway terminus, and gives its residents the business which naturally comes from occupying such a position. With a bridge all that business will cease. The big ferryboats will be rendered useless and their crews discharged. The switching crews in the various yards would be greatly reduced because a great deal of the work now done by them would no longer be necessary. The business of the hotels, restaurants and other places patronized by travelers would be so much affected that many of them would have to close up. The officials necessary to take care of the business of the roads affected would be cut down to small proportions. Detroit would become a station on the route between New York and Chicago instead of a terminal point. When a railway runs through a city or town, only stopping to take on or let off passengers, business is carried away from it. That would surely be the case in Detroit with a bridge over its river.

Besides these reasons why the people of this city should oppose the bridging of the river, there is another serious one, and that is the obstruction such a structure will offer to navigation. Those who favor the bridge project insist that this will amount to very little, but this is not true. With a pier in the river, and at least one if not two will be necessary, and a swing draw through which vessels must pass, the obstruction would be serious. Think of a steam barge with two or three vessels in tow, meeting another tow near that bridge, and this is a matter of daily occurrence in the season of navigation, what chances there will be for collisions and detentions. At night, when there is just as much activity as in the day time, the risk of accidents would be more than doubled. In the height of the season of navigation that draw would have to swing every five or ten minutes. When a train has the right of way then the vessels on each side must come to a stop. It will be very vexatious.

Congress has been for years spending large sums of money to get rid of obstructions in the Detroit and St. Clair Rivers. This has been necessary because of the steady increase in the traffic of the Great Lakes, which demanded greater facilities. It is now proposed to put in an obstruction which would be fully as objectionable as some of those which cost the country thousands of dollars to remove. It would be a most illogical act on the part of Congress. We hope every Michigan Senator and Representative will oppose the erection of such a bridge, and certainly those with Detroit constituents should fight such a project to the best of their abilities.

Prof. Gilbert H. Hicks, of the Division of Botany in the Department of Agriculture, died suddenly last week at his residence in Washington. He was a native of Michigan and graduate of the Michigan Agricultural College, where later he taught botany. He was in charge of the seed testing laboratory of the department, passing upon all seeds coming into this country for the department and experiment station

work. Prof. Hicks perfected a very excellent system of seed examination and clarification before distribution; also seed testing for impurities and adulteration, as practiced both by foreign exporters to the United States and native dealers. He discovered and brought to account a number of firms selling highly adulterated farm and garden seeds, the department being empowered by act of Congress to publish the names of such seedsmen doing fraudulent business. Mr. Hicks was a young man, just starting on a bright and useful career, and his loss will be mourned by the many close friends he has made, as well as felt indirectly by the great agricultural fraternity, in whose interests he was a tireless laborer.

The list of sugar factories projected in the State includes two more at Bay City, one at Caro, one at Benton Harbor, one at Monroe, one at Mt. Clemens and two at Pontiac. It looks as if the business would be overdone, in this State at least. Farmers should be careful about subscribing for stock in these enterprises. If they grow all the beets required they are taking about all the interest they should.

PUBLIC AFFAIRS.

The Supreme Court of the State has decided that the express companies doing business in this State must pay the stamp tax on bills of lading and that it is illegal for the companies to add the cost of the stamp to their rates on express matter. This is putting the tax where Congress intended it should be placed, and while the companies may appeal to the United States courts it is altogether probable that the findings of our Supreme Court will stand the test in this instance.

The Lake Carriers' Association, through its attorney, has protested against any bridge being built over the Detroit river that does not clear it with a single span. They said that a pier would be a nuisance and a constant source of danger to navigation, no matter where it might be located. The bill to be offered in Congress proposes a span of 1,200 feet, and then a pier from which a second span of 300 feet will be necessary. The only bridge which would not interfere with navigation is one with a single span, and high enough so that vessels could pass under it without danger to their spars and rigging. Such a bridge cannot be built near Detroit, as the banks of the river are too low.

The report that one of the great English shipbuilding and gunmaking firms was considering a proposition to establish a branch of its business in the United States is now confirmed. There is nothing strange about it. The alert Britishers wish to build ships and make guns where they can buy the cheapest steel. Like other enterprising foreign manufacturers, they are also not averse to getting under the tariff blanket with which we cover our home market. Once established, they would probably help their brother manufacturers to sing the praises of "Protection" whilst joining in the diversion of taking the hide off of consumers.—Philadelphia Record. Perhaps the Record can explain how manufacturers who are supplying the cheapest steel in the world, according to its own statement, can be "taking the hide off consumers."

Senator Vest, of Missouri, last week entered a strong protest against the system by which pension bills are rushed through Congress. In his remarks Mr. Vest said: "I do not want to be captious about this pension business, and do not want to set up myself as a reformer, but this thing of passing a lot of pension bills simply by the reading of the titles, and when a quorum of the senate is not present, has got to be stopped. Members of the south have sat here and permitted bills to be passed, having some delicacy about entering objection to the course of procedure. Recent events have obliterated sectionalism and we are united. We can therefore come here and object to this spolia—without fear of having our motives impugned or words misconstrued. I have been criticized by some of my people because I have not

taken a more determined stand on this pension question. I want, however, to pay munificently and liberally in pensions. I regard such payment as a sacred duty, but I do object to the passage of bills without proper consideration and with the same restrictions that are hedged about other measures." It is time some one was calling attention to this matter. The pension rolls are being filled up with the names of men who never did the country any service in the army, and could never secure a pension through the department. They work the congressman from their district, and he pushes their claims for pensions through Congress so as to have their aid when a re-election is necessary. Three-quarters of the private pension claims passed by Congress are fraudulent, and include deserters, bounty jumpers, and men who were hospital soldiers so as to escape service.

The Michigan division of the League of American Wheelmen held its annual meeting in this city last week. It was decided to memorialize the legislature in the interest of good roads, cycle paths, and finger-boards at every point where a road forks. It was stated that "the desire for good roads is strong throughout the State, and the wheelmen are ready to co-operate with the farmers to secure them. This combination is thought to hold enough strings to secure the passage of an act and land an appropriation." The proposition to work to secure better roads is all right, but we very much mistake the sentiment among farmers generally if they favor an appropriation by the State to build particular road-ways for which all are to be taxed. For instance, how would the farmers in the northern counties enjoy being taxed to build a highway in Wayne or Oakland county? As a matter of fact, farmers can now raise as much money as they please to build highways; but each road district decides that matter for itself. It is local self-government in the truest sense, and the present law does not limit in any way the raising of taxes to build or improve highways. Farmers can tax themselves to the extent they deem wise or necessary, and have just as good roads as they are willing to pay for. The State should never be allowed to tax them for highway purposes at the behest of a class who expect to receive the greatest benefits and contribute the smallest portion of the expense.

WASHINGTON CORRESPONDENCE

A report received at the State Department from Vice-Consul Blom, at Copenhagen, after calling attention to the enormous market which Denmark offers for American Indian corn, states that serious complaints have been made against the American inspection of Indian corn for foreign shipment, and that from investigations which he has personally made he considers the complaints well founded. It seems incredible, he states, that corn coming from certain houses in Baltimore, Philadelphia and New York, by regular steamers, could be passed by inspectors as corn No. 2, sail grade, as it was full of dust, dirt and sand, averaging from 3 to 5 per cent. To say nothing of this loss of weight, he believes it reasonable that this dirt has a bad effect on the sound corn, damaging it before it reaches its destination. Once having acquired a foreign market, every effort should be made to retain it, especially with a product which has been so difficult of introduction as American corn.

The corn-growing sections of the west are deeply interested in the project to educate Europeans in the use of American corn. Word comes from Kansas that Governor-elect Stanley and other prominent citizens of the state have taken action to push the exhibit of maize and its cooked products at the Paris Exposition. The state will be asked for a special appropriation to assist in this exploitation.

While eyes are turning southward in the direction of tropical islands, it is interesting to note, according to the United States Minister to Hayti, that American capital is about to seek an entrance into that island to develop its resources. A New Jersey company is being formed to construct artesian wells and water supply in various localities. Another company proposes to develop the native woods, which are very hard and susceptible of a high polish. Another syndicate is being formed to build a railroad which will

ALMOST 40,000 EXTRA PAPERS!

Having received so many requests from our subscribers for samples to be given to friends, we have decided to duplicate our entire list and mail an extra copy of this week's issue to every subscriber; so that as soon as the regular issue is printed, our presses will be started on these extra copies and run until they are completed, and we earnestly request that this extra copy be given to some friend not a subscriber. This will involve a large expense on our part as it will mean the cost of almost 40,000 twenty-page papers, but the distribution of this very large number will certainly result in The Michigan Farmer becoming a regular visitor in many homes in which it is not now known.

The position we have taken in offering the M. F. to the subscriber direct at 60c. is that he is entitled to it at the lowest possible price, and as after paying agents, commissions and prizes, we have been receiving on an average only about 60c. for each subscriber, that is the price he should be asked to pay. We therefore make the offer. But this position will not be fair to us unless we receive the support of our readers in not only sending their own orders to us, but also in inducing others to do so, and that we are receiving this hearty support is evidenced by many letters such as the following:

[Copy.]

THE MICHIGAN FARMER, Detroit, Mich.
Enclosed find \$1.20 for 2 subscriptions to Michigan Farmer for one year. You have placed the price so low I felt that I must get a new subscriber for you. Send The Michigan Farmer to Edward N. Harris, Flint, Mich., also renew my own subscription.

Grand Blanc, Mich.

CHARLES S. PIERSON.

WILL IT BE SUSTAINED?—We mean our stand to give the big commission and unnecessary expense to the subscriber instead of to the agent.

Now, farmers, your interests are at stake; your action during the next few weeks will settle the matter. Give your order to the \$1 agricultural paper and you encourage them to charge you \$1. We have taken the initial step and we are going to continue it or discontinue it on the outcome. Are you with us in the stand we have taken? If so, then send us your order at the 60-cent rate, which is simply \$1, less the tax; or six or more of you join together, sending us your subscriptions at the rate of six for \$3. We are losing no money in the deal, for we receive just as much net subscription as we did when we charged you \$1. We are simply giving the subscriber the 40 cents and it goes to no one else. To anyone who presents the idea that we cannot afford to get out as good a paper for 80 cents as we could for \$1, the old way, just say you know better, and we will back you up in it with our guarantee that The Michigan Farmer will be better the coming year than ever before, and we will cheerfully refund to any dissatisfied person his money.

If we are successful in demonstrating the fact that farmers are intelligent enough to send in their own subscriptions and do not require to be taxed to pay a middleman, then all papers will be obliged to follow our lead and thus acknowledge that our stand is right. We are fully convinced that the class of farmers who take agricultural papers are competent to do this little business matter themselves; the results so far abundantly demonstrate that our stand will be fully sustained, and we look for other papers soon to imitate us in this move.

open up the northern part of the island republic. The native government is aiding these enterprises as far as possible, and desires to induce American capital to invest there and assist in developing unknown resources.

Although some of the aggressive German journals are advocating retaliation against the United States, owing to the effect of the Dingley tariff on their exports, it is not believed that any such action will result. Some of the German chambers of commerce have been taking formal steps to ascertain the trend of public opinion on the subject and it has proved overwhelmingly against anything like retaliation. Consul Mason rather looks for a conservative policy in the future. He points also to a remarkable increase in the consumption of American corn in Germany, the gain being 74 per cent for one year. The Germans are looking forward with apprehension to the display of the value of corn which is to be made at the Paris Exposition. The Department of Agriculture intends making a great maize exhibit as a special feature, with free cooked samples in various forms to show Europeans what can be done with corn, and this fact has been reported, so that the fear is not without cause. Their experts have discovered that cornmeal is richer in fattening and heating qualities than any other cereal which can be offered as cheaply, and they are apprehensive that the laboring classes of Europe, once taught its use, will buy it to the exclusion of European grains.

The question as to whether we shall allow the sugar and other products of the Philippines to enter this country free of duty to compete with our own farm products is one now absorbing a great deal of attention. Senator Morgan, of Alabama, who is the ranking Democratic member of the Senate Committee on Foreign Relations, and has always been in favor of a strong foreign policy for the United States, contends that we can impose a duty on Philippine products, if we desire, or exclude them altogether. Our government has as much right to hold colonies as France or England, he says, and to make such rules for their control as it may see fit. Unless the Spanish treaty provides to the contrary, Porto Rico and the Philippines will not become territories of the United States, but will simply be outside possessions, not integral parts. Hence, the Senator claims, we may put any duty against them we may choose. He cites the case of Hawaii. We own it, and yet we continue to collect duties on its products, simply because Congress has declared that we should. There is no question of military government, and

if we can maintain a tariff against it for a moment we can do it forever.

The friends of the Nicaragua Canal project are active in plans for pushing their scheme, and evidences of their intention have already been seen in the Senate. Senator Morgan submitted a report in the Senate the other day on the subject of the new concession granted by Nicaragua to another company and gave notice of an amendment to his original bill. The friends of the measure are confident of its passage at this session. The President in his message to Congress spoke of the canal as a necessity and will of course promptly sign it when passed. A preliminary report of the government commission that has just returned here from Nicaragua after a careful study of the problem is being prepared and will be submitted to the Senate. The commission, of which Admiral Walker is chairman, considers the project a feasible one. The consensus of opinion seems to be that the canal must be owned or controlled by the United States.

The pure food men intend to push their campaign this winter with vigor. Last year a bill was introduced simultaneously in the Senate and House by Senator Proctor and Representative Brosius, respectively, looking to the regulation of commerce in adulterated food products and drugs. At the sessions here last March of the Pure Food Congress this bill was discussed and its proposed operations explained by Representative Brosius. Aggressive work has been going on since then and the other day a meeting of the local advisory committee of the congress was held in this city, Vice-President Matthew Trimble presiding. The report of the secretary showed gratifying progress, it being stated that delegates have been appointed by more than one-third of the State governors, besides which, commercial, medical, chemical societies and manufacturers' associations have appointed up to this time more delegates than were in attendance upon the last annual congress. The congress will meet in Washington during January to urge action by the Congress of the United States, and it is hoped that results will be forthcoming. Secretary Wilson is in hearty accord with the movement and in his own department is working constantly along lines of purity in all products. It is quite evident that pure food agitation has come to stay, at least until some effective legislation is enacted by Congress. The operations of some State laws of this class show the great advantage to be derived from proper national legislation on the subject. Some of the internal revenue laws enforced by the Treasury Department

operate against selling adulterations as genuine articles, but they are enforced only in the interests of revenue and do not take into consideration in any degree the fact that the people in buying the former are being humbugged and possibly injured.

GUY E. MITCHELL.

CONSIDER THE DIFFERENCE.

The Michigan Farmer is a weekly paper of 52 issues a year and goes to the subscriber often enough to be of some value to him in considering current topics, news and markets, while a monthly paper is only 12 issues a year and a semi-monthly only 24 issues a year. A monthly to be in proportion as low in subscription price as The Michigan Farmer would have to be sent for only 13 cents a year and a semi-monthly for only 26 cents a year.

The Michigan State Round-up Farmers' Institute for the present season has been placed by the State Board of Agriculture at Pontiac, Oakland county, and will be held March 1, 2, and 3. Extensive preparations are under way to make this the best meeting of the kind ever held in the State. No pains will be spared on the program, and farmers all over the State are urged to make plans to attend this Institute. The Board of Agriculture has secured a railroad rate of a fare and a third, and exceedingly low rates at Pontiac hotels.

NEWS SUMMARY.

Michigan.

Mrs. Sanderson's examination at Battle Creek for the alleged murder of her husband goes over until January. Meanwhile she lodges in jail at Marshall.

A report from Washington states that the cruiser Yosemite, which was the home of the Michigan Naval Reserves during the recent war, has been ordered to Manila.

An immense ice house is to be erected at Spring Lake, Ottawa county, by a Chicago syndicate which has gone into the ice business. The dimensions of the building will be 600 by 400 feet, and 150 carloads of lumber will be used in its construction.

John Scott & Co., Detroit architects, are held responsible by the coroner's jury for the collapse of the roof of the new Wonderland building on Nov. 11, by which twelve workmen were killed. The jury decided that the trusses and steel work of the roof were too weak to sustain the weight imposed upon them. What action will be taken by the prosecuting attorney has not yet been announced.

The Supreme Court has reversed the Wayne Circuit Court's order granting a mandamus to Conrad Pfeiffer to restrain the use of "Bible Readings" in the Detroit public schools. The court holds that having public school teachers read such selections is not appropriating public money for the benefit of any religious sect and therefore not contrary to the State constitution.

General.

Col. W. J. Bryan has resigned and will return to private life. His regiment may do garrison duty in Cuba.

Gen. Fitzhugh Lee and staff sailed from Savannah, Ga., on Sunday enroute to Havana. Gen. Lee is to land at Marianao and remain outside Havana until January 1.

The court of inquiry, sitting in Washington, found that the abandonment of the Spanish cruiser Infanta Maria Teresa in the big storm October 29 was not the fault of any naval officer, and thinks no further proceedings should be instituted.

Gen. Calixto Garcia, the distinguished Cuban leader, and head of the commission selected by the Cuban assembly to visit this country, died in Washington last Sunday. Sudden change from the warm climate of Cuba to the wintry weather of Washington, is said to have been responsible for the attack of pneumonia which caused his death. Gen. Garcia was 62 years old and had been prominent in Cuban affairs since 1895, when he was the original conspirator in the uprising against the Spaniards. His remains have been placed in the vault at Arlington and will later be removed to Cuba.

The treaty of peace between the United States and Spain was signed at Paris, at 8:45 o'clock last Saturday evening by the ten commissioners representing the two countries. It must now be ratified by the Spanish cortes and the Congress of the United States. The treaty contains 17 articles, but its essential features are: An expression of amity and of hope for perpetual peace; relinquishment by Spain of her sovereignty over Cuba; relinquishment by Spain of sovereignty over Porto Rico; Spain's cession of the Philippines; payment by the United States of \$20,000,000 for the Philippines; provision for an "open door" commercial policy in the Philippines.

Christmas and New Year's Holiday Rates Via Grand Trunk Railway System.

The Grand Trunk Railway System will issue holiday excursion tickets at the rate of one and one-third fare for the round trip to and from all stations on the System west of the Detroit and St. Clair rivers, and will also sell to all stations of connecting lines. These rates will include Niagara Falls and Buffalo. Selling dates for Christmas are Dec. 23rd, 24th, 25th and 26th, 1898; for New Year's, Dec. 30th and 31st, 1898, and Jan. 1st and 2nd, 1899; all being valid to return up to and including January 3rd, 1899.

To Canadian points two rates are made: one single fare for the round journey, and one at the rate of one and one-third fare, according to the limit of the ticket.

For rates and information call at the City Ticket office, 84 Woodward Ave., or at the Grand Trunk depot, foot of Brush St., Detroit.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters "or The Household to Mrs. Ella E. Rockwood, Flint, Mich.

For The Michigan Farmer.

LINES ON THE DEATH OF A FRIEND.

When the Christmas bells were ringing
"Peace on earth, good will to men,"
With what joy we met together
At the old home once again.
And we filled the day with gladness,
Talked the old times o'er and o'er,
Then without a thought of sadness
Said we'd meet again next year.

But one dear one now has left us,
And our hearts are filled with pain,
For the face we ne'er shall see—
Never greet on earth again.
For God's hand hath taken Lizzie—
Most patient, gentlest one of all—
To that land of light and beauty
Where no shadows ever fall.

Shall we weep and wish her back here,
To this life of pain and tears?
For our hearts will sadly miss her
All the coming weary years.
Oh, dear Father, lead and teach us
Meekly to Thy will to bow;
Help us to be more like Jesus,
Like the one who is with Him now.

From this earth, so full of sorrow,
Jesus bade her soul arise,
And in love she's watching o'er us
From her home beyond the skies.
Husband, parents, sisters, brothers,
Only trust in God's dear Son,
Then some day we'll meet together
On an eternal Christmas morn.
MRS. GRACE.

HOME CHATS WITH FARMERS' WIVES.

AUNTIE'S CHICKEN PIE.

Throughout the length and breadth of our family extends the fame of auntie's chicken pie. Throughout all the years of her busy and useful life, too, she has delighted in concocting delectable dainties of other kinds and her chicken pie is not by any means the extent of her skill in the culinary line. Even now when her hair has turned to silver and she is nearing the limit of earthly life set by the wise man of old, she loves to get up a good dinner and is never happier than when such a meal is in progress under her hands.

Auntie is a natural born cook. She does not go by rule but will dip in a little of this and a little of that regardless of cook book measures when baking. The result is always satisfactory, and her skill in this direction is the despair of younger and less experienced cooks.

But I was going to tell you about her chicken pie.

Two chickens (fat hens are good for this purpose) cut up and cooked in plenty of water until perfectly tender will be needed to fill a common milk pan, such as auntie usually bakes her chicken pie in. When nearly tender the chickens are salted. When thoroughly done, yet not cooked to pieces, season with a liberal allowance of butter and sprinkle with pepper. Thicken the broth with flour, stirred smooth with a little cold water, leaving the meat in the kettle meanwhile. If the water has boiled away so there is not sufficient for plenty of gravy replenish it from the teakettle.

The crust is made of buttermilk or thick sour milk, exactly like soda biscuit, and should be rich and flaky. It is not made hard, but as soft as can be easily handled. Roll out rather thin for the under crust and line a bright tin pan, bottom and sides, letting the crust come over the edge of the pan a little all around. It might not be necessary to grease the pan but auntie always does so. When the lower crust is in place arrange the pieces of chicken with a fork, being careful that no bones lie against the crust in such a manner as to break through it which would cause the gravy to leak out.

When all the chicken is in the pan pour in the gravy, reserving a bowlful to be served separately, since what is in the pie is mostly absorbed in the baking. Cover with the remainder of the crust, pinching the edges well together so the gravy will not escape, and place in a moderately heated oven. It should brown nicely yet not burn at all, and will bake in about one hour. Should the oven be too hot cover

the pie with a piece of paper to prevent burning.

We all think auntie understands warming over the remains of a chicken pie. The way she does it makes it just as good as it was the first day, if not a little better. Of course it has lost its shapely form and does not look quite so nice as at first, but it tastes good. This is the way she does it.

Into an iron spider put a generous lump of butter and a pint or more of hot water or gravy, if any. Cut the remains of the pie in pieces, quite small, and with whatever chicken there may be left put it into the spider and set on the back of the stove, covering it closely to retain the steam. After it begins to get hot remove the cover and stir so as to bring the under pieces to the top, and vice versa. Cover once more and allow it to cook slowly, adding gravy or a little more hot water if it seems dry. When it is light and moist turn it out upon a platter and serve. The steam from the hot water softens the crust, making it moist and light and—well you will have to try it in order to see how good it is.

Perhaps it may be well to explain that this auntie is the one mentioned a few weeks since as taking care of my mother and sister during their last illness. She is now my dearly loved and honored step-mother. Aunts make the very best of step-mothers, I think.

THINGS NEW AND OLD FOR CHRISTMAS.

Christmas will soon be here; for busy women who have little time and possibly less money at command suggestions for gifts that require little of either may be in place. All should have a part in gift giving on the day which commemorates God's best gift to man.

A patriotic catch-all for use on the dressing table is made from three small Japanese baskets costing from one to three cents apiece. Line with red, white and blue silk, or silkoline, and fasten together with bows of red, white and blue ribbon. A crazywork pincushion of bits of red, white and blue silk or worsted is an especially appropriate gift.

A nice puzzle is made by pasting a large colored flower plate found in floral catalogues, on stiff cardboard, and when dry cutting it into rather small irregular sections. For school children an old map may be used.

A length of bright hued ribbon with a tiny bell on each end looks pretty on a tree, and can be used for a book mark.

For one's city friends a pretty box wrapped in white tissue paper, tied with ribbon, and enclosing sprays of bitter sweet, which grows abundantly this year, will be most welcome. It would be a pretty conceit to have the bright buds nestle in a bed of green woods moss.

A useful and attractive gift for an invalid would be a box of suitable size and shape for a footstool; to be used also as a receptacle for pencil, thimble, needle-book, comb, brush, letters, etc., as it could easily be divided into compartments. Cover and line the box with cretonne or any material convenient; a bright warm color is cheering. Finish the cover in the same way with a frill on three sides, and screw to the box with small hinges. The hinges may be concealed with a rosette, bow or other device.

Handsome blotters are made from white, yellow and pink blotting paper. Cut any preferred size or shape. With a small punch cut holes a little distance apart in the upper edge of each leaf, and fasten together by running narrow ribbon through the holes. Finish with a ribbon bow at each side.

Carpet splasher: Cut from fine, evenly-woven tea matting as large a piece as possible. It is prettier to be longer than it is wide. Stitch around the edge on the machine to prevent raveling, then bind with braid. Will be found useful in front of the washstand. Make a mat for the slop jar, and a "silencer" in the same manner. These are so quickly and easily made and so inexpensive. When soiled they can be tossed into the fire and replaced. The tea matting can be had for the asking at stores where one is accustomed to trade.

A pair of holders and an ironing mat will be welcome to all housewives. The mat may be an eight or ten-inch-long oval, by four or five inches in width. Cut plain cloth into strips an inch wide, make a braid of three strands, and when sufficiently long sew together in the form indicated.

There is yet time for more elaborate gifts. A workstand can be made of two cheese boxes. Cover and line with cretonne or sateen, and arrange at suitable distances apart to a standard made of three broomsticks wound with cretonne, or if preferred with ribbon. Wind a section of a barrel hoop for a handle and fasten with tacks to the upper box, covering the ends with a ribbon bow and ends.

For a peacock fan, cut the edges of two light-weight palmleaf fans into points of the same size and shape, and follow the raised lines with tinsel cord. Paste the eye or tips of peacock feathers around the edge of one, and arrange a clover leaf of three at the handle. Tack the fans securely together and tie a wide ribbon bow around the handle.

Crocheted slippers can be quickly and easily made. Use Germantown yarn and a medium-sized bone hook. Make a chain of twenty-one stitches. Always work in the back part of the stitch. For the first row make a treble crochet in every stitch. For the second row make one treble crochet in each of ten stitches, three treble crochet in next stitch, one treble crochet in each of the other stitches. Always work three treble crochet in the center stitch. Repeat the second row until the work is about four inches in depth, then work back and forth in eleven stitches until there is a strip long enough to go around the sole. Crochet to the other side, and sew to lamb's wool soles. Finish with a row of shells and ribbon bow in front. Can be made in a day by nimble fingers.

SARAH E. WILCOX.

CHRISTMAS GOODIES.

PLUM PUDDING.

Two pounds of raisins, seeded, two pounds of currants, well washed and dried; half a pound of citron cut in small, thin slices; two pounds of stale bread crumbs; one pound of very finely chopped suet; juice and grated rind of two lemons; seven eggs well beaten; one pound of the best brown sugar; two grated nutmegs.

Mix all the fruit well together, then add the sugar, and mix again; next the suet and lemon, and mix all together once more. Now stir in the nutmeg and bread crumbs, and then add the eggs. When this has been done, add sweet milk, a little at a time, being careful to make it only moist enough to stick together, not wet; it will take about one quart of milk. Pour this mixture into a pudding cloth, which has been wet with hot water and then well floured inside. Tie, leaving room for it to swell, drop into boiling water, and boil steadily for six hours.

PUDDING SAUCE.

Half a cup of butter; one and a half cups of white sugar, rubbed to a cream. Add two well beaten eggs, and when ready to serve add enough boiling water to make a thick cream. Serve hot, flavoring to taste.

ORANGE PIE.

Three eggs; one cup of white sugar; two oranges, the juice of both, and grated rind of one. Cream the sugar with one tablespoonful of butter, then stir in the orange, and add the eggs, saving the whites of two. Beat this well together. Line a pie plate with rich crust, and pour in this mixture. Bake in a moderate oven until the paste is nicely browned on the edge. Beat the whites of eggs with three tablespoonfuls of powdered white sugar, spread this over the pie when it is done, replace it in the oven and brown lightly.

GELATINE CREAM.

One quart of sweet cream; half a cupful of white sugar; one ounce of gelatine, dissolved in enough cold water to cover it. Whip half the cream to a stiff froth; boil the other half with the sugar, and after it is removed from the fire add two teaspoonfuls of vanilla extract. When the cream is cooled a little add the soaked gelatine, then the well beaten yolks of five eggs. Beat until it begins to stiffen, then beat in quickly the whipped cream. Pour in well-wet moulds and set on the ice or in a cool place to thicken.

CHRISTMAS CAKE.

Three-quarters of a pound of butter, rubbed to a cream, with one pound of powdered white sugar; six eggs, whites and yolks beaten separately; two cups of sweet milk; one and three-quarters pounds of sifted flour, and three teaspoonfuls of baking powder sifted with the flour; half a pound of currants, washed and dried; half a pound of raisins, stoned; one-quarter pound of citron, sliced thin; one grated nutmeg. Sprinkle the fruit with part of the flour. To the creamed butter and sugar add the beaten yolks of eggs, the nutmeg, and the milk; then add the remainder of the flour and whites of eggs, alternately. Put in the fruit last. Mix all well together, and bake it one and three-quarters hours, keeping the oven an even heat.

CITRON POUND CAKE.

One pound of butter rubbed to a cream with one pound of white sugar. Add first to this the beaten yolks of eight eggs; then one pound of flour, sifted, the beaten whites of the eggs, and last, one pound of citron very thinly sliced and cut in small bits and slightly dredged with flour. Bake two hours in a moderately heated oven. When the cake is cold, cover the top and sides with icing.

ILKA.

The true Christmas spirit is the one noted in the following, which we clip from the Ladies' Home Journal:

In your Christmas purchasing do not be tempted to forget those who, because of their poverty, are unable to do any shopping either for themselves or for others. Let your presents to them be of a substantial character—a ton of coal, some warm clothing, some

(Continued on Page 469.)

THE MODERN
STOVE POLISH

ENAMELINE

Makes an old Stove as
bright as new in a minute.

J. L. PRESCOTT & CO. — NEW YORK —

SILK REMNANTS for CRAZY WORK

At a great bargain we offer a big package of beautiful silk remnants. Each package contains from 40 to 50 large pieces of silk—carefully trimmed—and is prepared especially from our large accumulation of exquisite patterns of silk remnants, and they are especially adapted to all kinds of art and fancy work. The most beautiful colors and designs. All remnants of large size. With each box is two skeins of the very best embroidery silk, assorted colors. Send us 14 cents in stamps or coin and get this beautiful assortment, postpaid. For 50 cents we will send enough silk remnants for a quilt 4 sq. yards. Address Paris Silk Agency, Box 3045, N. Y. City.

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in buying direct from factory. 30 days free trial. No agents large profits to pay. No money in advance.

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all attachments free, over 100,000 in use. Catalogue and testimonials free. Write today for special freight offer.

CASH BUYERS' UNION, INC.
158-164 West Van Buren St., B-317 Chicago, Ill.

MOTHERS Your Children Cured of Bed Wettings, Sample Free. Dr. F. E. May, Bloomington, Ill.

When writing to advertisers please mention that you saw their advertisement in the MICHIGAN FARMER.

Home Made Christmas Gifts.

Book of Instructions for Art and Fancy Work Sent Free.

It is remarkable how much can be done in the way of home made Christmas presents at a small expense, with the aid of Diamond Dyes. In "Fancy Work and Art Decorations," by Mrs. Daggett, Editor of The Home, there are some fifty illustrations of dollies, table covers, scarfs, pin cushions, etc., that have been made by using Diamond Dyes. Complete instructions are given in this book for making these various articles. It will be of great value to anyone in preparing Christmas presents, and is sent free to any reader of MICHIGAN FARMER who sends a 2-cent stamp for postage, to Wells, Richardson & Co., Burlington, Vt.

This liberal offer is made to advertise the reliable Diamond Dyes, and to get their book upon home dyeing into the hands of women who want to dress as well as their neighbor, at small expense, and make their old clothing look like new. There is hardly a home where Diamond dyes cannot be used to advantage. They color faded ribbons and feathers so that they look like new; they will dye the heaviest garments as well, and make fast and beautiful colors that do not fade or crock; coats and suits can be readily colored with these simple home dyes, and shabby clothing changed to look like new. Send to-day for the free book on fancy work. With this will be sent without charge, colored cloth samples showing the colors made by Diamond Dyes, also their instruction book for home dyeing.

money, a box of groceries, or a basket of Christmas marketing topped with a bunch of holly. And to the little children in whose homes Christmas is little more than a name send some of the many bright, new tin toys which are so inexpensive; some candy, some fruit, bright red woolen mittens and Tam o' Shanters, and, if you can afford it, some good stout shoes and warm stockings. A piece of bright-colored plaid will make a pretty gift for the little girl who has never, perhaps, had a new dress in her life. Accompany your Christmas presents with some cheery Christmas greeting and some Christmas greens. Be very sure that this thoughtfulness will bring its own reward, and that in the years to come the memory of the Christmas when you gave most and received least will be the happiest of all memories to you, for "there is that scattereth, and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

SHOE BOX—PHOTO FRAME—CARD BASKET.

A good way to have your shoes handy, and yet out of sight, is to take an old chair with a strong frame and no bottom, and make a large bag to reach nearly to the floor, with the open end tacked all around inside the empty seat rim. Around the outside of the seat tack a pleated curtain of saten or cretonne reaching to the floor, to hide the bag. Get a thin board for the seat, pad it with excelsior or cotton, then cover with goods to match the curtain. The seat should be put on with a hinge. A cushion should be made of the same goods for the back.

A photo frame is made in this way: Cut out a heart-shaped piece of pasteboard, cover with pink paper, take strips of white wadding one and a half inches wide, button-hole with pink zephyr, make rosettes of these strips, and fasten around the heart with a pink plush ball in the center of each rosette. (The ball can be made of the zephyr.) Cut a hole in the center to slip the photo in, and suspend with pink ribbon.

To make a pretty basket for photographs or cards, of carpet warp, crochet a flat mat about three or four inches across, or larger. Then crochet some pretty wheels and fasten together and to the bottom to form a rim. Prepare some glue or thick paste, thoroughly wet the work with it, stretch it over the bottom of a small pail or pan previously greased so the glue will not stick. When dry take off, varnish, and sprinkle with flitters. Line the bottom with bright colored silk, quilted. Tie little bows between the wheels.

Cups and saucers are made the same way, using as a mould a pretty shaped cup without a handle. Once begun, this work seems to have no ending, so many ideas present themselves, such as flower pot covers, catchalls, button baskets, cornucopias, work boxes, etc.

AUNTIE B.

FOR CHRISTMAS.

Very pretty and inexpensive presents can be made of crepe tissue paper. Boxes for handkerchiefs, neckties, gloves, etc. Take boxes of desired shape, cut a strip paper to reach around outside, fasten with a needle and thread. The cover should have two or three layers of wadding. Fasten the paper over, then baby ribbon to match may be put straight across, or crossed as desired, and ends fastened down. The outer edge of cover may be covered with paper put on in form of a ruffle. The same articles can be made out of crepe tissue paper and celluloid. These boxes may be lined with soft silk, satin, or lace.

For young children make picture books. Get two colors of cambric, cut them out the desired size, pink the edges, fold together and sew firmly. Then paste in all the bright pictures that there is room for, and you have something the little ones can bang around to their heart's content.

Will some one send directions for making ice wool shawls?

FROM TUSCULA COUNTY.

J. A.—The rich pink dye spoken of, is the Magic package dye pink. Sold by druggists.

FULLY SATISFIED.

I am perfectly satisfied with the sewing machine purchased of you in February, 1898.

MRS. FANNIE JENNER.

Ithaca, Mich., Box 431.

A SUCCESSFUL SUNDAY SCHOOL.

Some time ago our editor gave us a nice little talk about having Sunday school, and with her permission I will tell about ours.

There had been no Sabbath school at the little schoolhouse on the corners for years. It was a wonderment to me on my occasional visits to the day school what the children did with themselves on Sunday. At last some of the women living near the schoolhouse (after talking about it a whole year to get up their courage) asked a Christian man living near if he would not superintend a Sunday school there. He had another school to look after but by appointing ours at an earlier hour he consented. Permission was then asked of the officers in the district for the use of the schoolhouse.

The first Sabbath there were just twenty-seven present, and our first quarter's supplies cost \$3.20. At the end of the month we looked over the schoolroom and asked ourselves where they all came from, for our school had increased to over fifty, and at the end of the second month the attendance one Sunday was sixty-seven.

Children's day was observed, and so well did all pull together that the exercises were far superior to those held in the surrounding churches. The excitement of that over, a social was held to keep up expenses, and all settled down to steady attendance all through the summer. The rainy fall weather combined with sickness in several homes has thinned our ranks but the interest remains the same and a Christmas tree is talked of. Last quarter's supplies cost nearly \$8.00.

There are two things the school needs, an old-fashioned revival and a good library. Either one will bring the other.

Young people must and will read something, and if parents and teachers do not see that they are supplied with good reading they will read the trashy story papers that do not contain a single elevating thought. When a child I was allowed to read everything, from a dime novel to the last murder case. When years of discretion brought a desire for sensible reading matter the mind was so weakened by years of trashy reading that at first I could not remember a line of solid reading.

A friend once gave me a large bundle of story papers, and one day while changing the papers on the pantry shelves several copies of a popular story paper were found among them. Some high sounding names caught my eye, untidy shelves and littered floor were forgotten until the clock warned me that a half hour had been worse than wasted. Those papers were the devil's own kindling wood to me, and in disgust I threw them all in the stove. Since that day they do not have such a fascination for me. It is this experience that makes me feel it to be of the highest importance for the minds and souls of children and young people that every Sabbath school should have a good library.

MRS. GRACE.

The Poultry Yard.

For The Michigan Farmer.

A FARMER'S POULTRY HOUSE.

I have noted the request of a reader in a past issue of The Farmer for a poultry house plan, also the excellent diagram given by Mr. Hogue. We have a poultry house on the same general idea as the one described, but being a little smaller. Our house was constructed for use when we were keeping several varieties, and for that purpose served us well.

I have another plan of a poultry house that has proven to be very good, and which I think would prove practical for the average farm flock. It was constructed with an idea to warmth, so that it would be practical to keep single comb varieties in this latitude and not be obliged to furnish artificial heat to insure their combs from being frosted. I have had the house in practical service for the past five or six years, and during that time I have regularly wintered a flock of White Leghorns in it, and as yet have not had a single frozen comb, although no heat has been supplied for the purpose of raising the temperature. As will be apparent, the structure is fairly warm, a quality that a poultry house must have if the owner expects any returns from his flock during the winter months; hens will not flourish under

frosty conditions any more than any other kind of live stock.

The plan on which the house is built is what might be considered semi-side-hill, although, strictly speaking, I do not believe that it would be considered a sidehill poultry house. This plan of making a hen house, while not very common among farmers, is, nevertheless, a feature that can often be introduced to an advantage; and if properly constructed and cared for, it can scarcely fail to give general satisfaction to the owner. There is one thing that is very essential to a house made on the sidehill plan, and this is plenty of sunlight; otherwise the desired results will be destroyed in the very beginning. I have in mind an instance where a house constructed something after the underground plan, although in this instance made entirely of stone on comparatively level ground, has been torn down during the past two or three years on account of the general dissatisfaction that it gave. I think that without doubt the main cause of the difficulty lay in the fact that it could not be opened properly to the sunlight, and consequently was always dark, gloomy and damp, especially during stormy or cold weather when it was most desirable that it should be in the most comfortable condition possible. Ordinarily, I believe that if a person is able to place his hen house on high and dry ground, and it should never be placed anywhere else, and is careful to provide means for any ample supply of sunlight, he will be very well satisfied.

The hen house that I referred to is situated on a slight knoll that inclines to the south and falls about two feet to the road; the soil is hard clay. The building itself is about ten by fourteen, inside measurement. An excavation was at first made about thirteen feet wide, and some eighteen feet in length; as the team and scraper, together with the plow, were used for the purpose, it did not prove a very serious task, but it would have been much easier had the work been done sometime when the ground was moist instead of being undertaken during August, when the soil was the driest. The rear end was cut down to about three feet depth with a gradual slant of the surface of the sides towards the front. The soil in front was lowered so that there would be comparatively little danger of water collecting, owing to the fact that the interior of the front was really lower than the outside.

The rear end and two sides of this excavation were enclosed by a three-and-a-half-foot wall, varying from eighteen to fourteen inches in thickness. There was also a low wall along the front end coming a little above the top of the ground for the framework to rest on. On top of this wall was placed an ordinary half pitch roof. The sides were a little low as is obvious, but the middle was all that could be desired; and on account of the steep pitch of the roof no difficulty will be found with the low wall. The interior of the roof was sealed with four-inch matched stuff. Brace pieces extend across the gable about six and a half feet from the ground, so that the sealing is attached to these instead of going up to the gable peak. This arrangement is not only a saving of material, but also gives the interior a better appearance. The rear end is sealed likewise. The front end includes the door and two windows; the former is ordinary door size; the latter are medium-sized, double-sashed windows. The parts unoccupied are sealed or papered.

This house was very cheaply made, in fact, I do not think that it cost in cash more than \$10 or \$12. The work was all done without employing any outside labor, hence the only money out was for material that we were unable to supply. About all that had to be purchased were a few two-by-fours, inside sealing, and shingles. For roof boards we used some old pine fence stuff that was in very good condition. Of course, if a person should have to purchase all of his material, and employ labor to do the work, the expenses would be considerable higher. But there is very little about such a structure that an ordinary farmer cannot do if he only will.

This structure was made to accommodate about twenty hens, which it will do very well with ordinary care; whether or not it would prove room enough for more depends entirely on the manner in which it is kept. For a regular farm hen house built on this plan, I would suggest that it should

be at least twenty feet in length, and about twelve feet wide. The wall should be about four feet high, and a third pitch roof placed on these. To make it warm the interior should be sealed; papering will do, but it is not nearly as satisfactory as sealing, nor will it last as long.

The interior arrangement does not need to differ materially from any other style, and in this respect the owner can please himself. The house referred to has a small hallway about the door of wire netting. The roosts are on the platform plan, and very satisfactory. Being in want of a suitable place to keep an incubator the past season, I converted this building into an incubator house, and it has answered the purpose very well.

C. P. REYNOLDS.

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Legal Department.

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Detroit, Mich.

Working Land on Shares.—W. H. T., Northville, Mich.—You change the form printed some time ago to meet the circumstances. We have no form for cropping agreement for a third.

M. H., Lapeer, Mich.—You had better consult an attorney of your own city. However, if you will send diagram and more detailed statement, giving all the dates, we will give you our opinion on the facts as stated.

Sale in Defraud of Creditors.—Sale of Chattel Mortgaged Property.—A. B., Berville, Mich.—1. Can a man deed his real estate to his wife for one dollar to cheat his creditors?—No, if you can prove the fraud. 2. Can a man sell chattel mortgaged property without written assent of mortgagee?—No, it is criminal.

Ownership of Lakes.—J. B. S. K., Sturgis, Mich.—How many acres does a lake have to contain before it belongs to the government?—The soil under the water of the inland lakes of this State does not belong to the general government or to the State, but to the riparian owners. The size of the lake is not considered.

Use of Barbed Wire Permitted.—F. H., Mason, Mich.—If I build a barbed wire fence along the public highway, or as my share of a partition fence, am I liable for damages for injury to stock?—This question has not been passed upon by our courts, but in our opinion the use of barbed wire in the construction of fences is lawful, and there is no liability for injury to animals by its use, unless the fence is so constructed as to invite such disasters. The negligent use of barbed wire creates liability for injury resulting.

Drain Taxes.—Payment under Protest.—Recovery.—B. R. H., Ingham County, Mich.—What steps must be taken to protest ditch tax? Please give outline of statute.—Pay township treasurer amount of tax and at the same time protest against payment by handing him written statement, signed by you, specifying the grounds of such protest. The person paying under such protest may, within thirty days, and not afterwards, sue the township for the amount paid and recover, if the tax is shown to be illegal for the reasons specified in such protest. The better way would be to proceed at once by injunction against the collection of the taxes and then have your grounds passed upon before you have committed yourself to very extensive litigation. Write to Secretary of State at Lansing for full text of the statute.

Purchase of Seed.—Warranty.—D. M., Gordonsville, Virginia.—A pays B above the market price for seed wheat which failed to grow on account of having been heated in the bin. To what extent, if any, can A collect?—There is no implied warranty that particular seed will grow. Seed dealers are responsible on implied warranty that the seed in the package or that sold is that of the variety corresponding to the mark on the package or of the kind purported to be sold. For example, if the seed sold was plantain seed, though represented to be clover seed, the vendor would be liable for damages. Where one farmer sells wheat seed to another farmer there is no implied warranty, except that the seed sold is wheat. Who should suffer for the loss in the instance shown in your question depends upon the delivery under the terms of sale, and is a technical question depending on the facts. If B bought the wheat after it had been heated it was a poor bargain and his loss, provided A did not fraudulently conceal facts which he should have stated to B. On the other hand, if B purchased the grain to be delivered at a future date, to be held by A at the risk of A, A would be responsible for the loss if the grain became heated after sale but before delivery through his negligence. The question has many sides, and can be answered only in light of actual facts.

For colds that come in the night, you cannot have medicine too handy, and the right kind of medicine is Jayne's Expectorant.

EVERYONE To mention the new SAYS price means a subscription. That is easy. Say 60 cents to your neighbor and see what he says.

The Markets.

WHEAT.

The market during the past week has been inactive, and showed weakness. There is nothing doing in a speculative way, and the close of navigation has operated to stop shipments. The only change in the situation is the announcement that Russia's crop is an unusually large one, and she will have a considerable amount for export after meeting the demands of such sections of the empire as suffered from a failure of the crop. We see no reason, beyond the large increase in the visible supply, why prices should weaken when values are at as low a range as at present, and the outlook is no worse than it is. Thursday the market ruled strong at an advance, as the result of reports of crop damage in the Argentine. Both Liverpool and Paris advanced also.

The following table exhibits the daily closing sales of spot wheat in the Detroit market from November 21 to December 15, inclusive:

	No. 2	No. 1	Mixed	Mixed
	Red.	White.	Red.	White.
Nov. 21.....	71½	71½	70¾	70¾
" 22.....	71½	72	71	71
" 23.....	71	71½	70¾	70¾
" 24.....	70¾	70¾	70	70
" 25.....	70¾	70¾	69	69
" 26.....	69¾	69¾	69	69
" 27.....	69¾	69¾	69¼	69¼
" 28.....	69¾	69¾	69¼	69¼
" 29.....	69¾	69¾	69¼	69¼
" 30.....	69¾	69¾	69¼	69¼
Dec. 1.....	70¾	70¾	69¾	69¾
" 2.....	69¾	69¾	69	69
" 3.....	69¾	69¾	69¼	69¼
" 4.....	69¾	69¾	69¼	69¼
" 5.....	69¾	69¾	69¼	69¼
" 6.....	69¾	69¾	68	68
" 7.....	68¾	68¾	67¾	67¾
" 8.....	68¾	68¾	66	66
" 9.....	67¾	67¾	65¾	65¾
" 10.....	67¾	67¾	67	67
" 11.....	67¾	67¾	66¾	66¾
" 12.....	67¾	67¾	67	67
" 13.....	67¾	67¾	67	67
" 14.....	67¾	67¾	67	67
" 15.....	69	69	68¾	68¾

The following is the record of the closing prices on the various deals in futures each day during the week:

	Dec.	May.
Friday.....	67½	68½
Saturday.....	67½	68½
Monday.....	67	68
Tuesday.....	67½	69
Wednesday.....	67½	68½
Thursday.....	69	70

The visible supply of wheat in the United States and Canada on Saturday last was 26,738,000 bu., as compared with 24,115,000 bu. the previous week, and 37,744,000 bu. at the corresponding date in 1897. The increase last week was 2,623,000 bu.

Lake navigation has finally closed, and no more grain will be shipped by water until next spring.

Wheat in this State went into the winter in excellent condition. Perhaps some of it had too much growth, and the Hessian fly was reported in some sections, both the result of sowing too early.

Broomhall estimates the Australian surplus at 15,000,000 bu. A recent estimate was 9,400,000 bu. During the month of November the stocks of breadstuffs in the principal countries of Europe were increased about 4,760,000 bu., as against an increase of 6,330,000 bu. during October, and an increase of 4,140,000 bu. during November, 1897. The total stocks in store were reported at 23,120,000 bu. on December 1, and 24,360,000 bu. on November 1, and 26,020,000 bu. on December 1, 1897.

Broomhall's Odessa correspondent says that sufficient grain to last until spring has now been purchased for the famine-stricken government of eastern Russia; and, generally confirming the recent official estimates, he expresses the opinion that exports in the spring will be on a larger scale, if the new crops come through the winter all right.

The movement of wheat from first hands in the United States from July 1 to December 1, was about 145,000,000 bu., against about 135,000,000 bu. during the corresponding time in 1897. The exports of flour and wheat during the same period were equal to about 98,000,000 bu., against about 100,000,000 bu. during the corresponding period in 1897. The official visible supply is about 10,000,000 less than last year. Estimating the wheat crop of the United States at 650,000,000 bu.—which is about the accepted commercial estimate at home and abroad—and allowing 42,000,000 bu. for the supplies in all hands on July 1, 1898, the aggregate supplies would be 608,000,000 bu. Allowing 375,000,000 bu. for domestic wants and seed, 98,000,000 bu. for exports to date, and 100,000,000 bu. for supplies in all hands on July 1, 1899—about the normal quantity on a good crop—makes an aggregate accounted for of 573,000,000 bu., and leaves for export during the remaining seven months 119,000,000 bu. The exports of flour and wheat from the United States from December 1, 1897, to July 1, 1898, were equal to about 118,000,000 bu.—Chicago Trade Bulletin.

DETROIT PRODUCE MARKET.

	Detroit,	ber 15, 1898.
FLOUR.—Quotations		Jobbers' lots in
Straights.....		\$3.50
Clear.....		3.25
Patent Michigan.....		4.00
Low Grade.....		3.00
Rye.....		3.25

CORN.—The visible supply in the United States and Canada is now 17,846,000 bu., a decrease of 2,516,000 bu. the past week. Quotations are as follows: No 2, 35c; No 3, 34½c; new, 32½c; No 4, new, 32½c; No 2 yellow, 37c; No 3 yellow, 36½c; new, 35c; No 4 yellow, new, 33c.

OATS.—The visible supply of this grain on Saturday last in the United States and Canada was 5,361,000 bu., as compared with 5,544,000 the previous week, and 14,349,000 at the corresponding date in 1897. The market steady at 29½c for No 2; No 3, 28½c per bu.

RYE.—The visible supply of this grain on Saturday last in the United States and Canada was 1,228,000 bu., as compared with 1,024,000 bu. the previous week, and 3,681,000

bu. at the corresponding week in 1897. No 2 is quiet at 55c per bu.

BARLEY.—The visible supply of this grain in the United States and Canada on Saturday last was 4,002,000 bu., as compared with 3,840,000 bu. the previous week, and 4,889,000 bu. at the corresponding date in 1897. Good samples sell readily at \$1 per hundred.

CLOVER SEED.—Prime spot quoted at \$4.40; March quoted at \$4.45; No 2 quoted at \$3.25@3.75 per bu.

BEANS.—Market steady; December sold at \$1.06 per bu.; January, \$1.07; February, \$1.08 per bu.

FEED.—Bran, \$12.00; coarse middlings, \$13.00; fine middlings, \$14.00; cracked corn, \$15.00; coarse cornmeal, \$14.00; corn and oat chop, \$13.00 per ton in jobbing lots.

POTATOES.—Market unchanged. Quoted at 30¢@35c per bu. by dealers, and farmers receive same price in small lots on city market. At Chicago the market is a little stronger at 28¢@35c per bu.

CABBAGE.—Quoted at \$3.25@3.50 per ton in car lots, and \$2.50@3.00 per hundred from wagons.

PRESSED HOGS.—Selling at \$3.75@4 per cwt. for large, and \$4.25 for small hogs.

CELERY.—Selling at 20¢@25c per dozen.

ONIONS.—Selling at 35¢@40c per bu. on market, and jobbers quote 30c in large lots. At Pittsburgh quotations are 25¢@35c per bu. for red, and 35¢@40c for prime yellow.

BUTTER.—The market is unsettled, but no further decline in values has taken place. Creamery is quoted at 20¢@21c; fancy dairy, 15¢@16c; fair to good, 13¢@14c; low grades, 9¢@10c per lb. At Elgin this week sales of creamery were at 20¢@21c per lb.

APPLES.—Snow, \$3.50@4 per bbl; best winter fruit, \$2.75@3 per bbl.

DRIED APPLES.—Evaporated, 8½¢@9c; dried, 4¢@5c per lb.

LIVE POULTRY.—Spring chickens, 6¢@6½c; fowls, 5c; ducks, 6c; geese, 6c; turkeys, 7¢@7½c per lb. Dressed poultry is quoted 1¢@2c higher than live.

EGGS.—Fresh candled, 22¢@23c per doz; cold storage, 16¢@17c per doz. Market very firm. Small lots from wagons sell at 24¢@25c.

BALED HAY AND STRAW.—Best timothy, in car lots, \$3 per ton; rye straw, \$5; wheat and oat straw, \$4.00.

WOOL.—Normal quotations in interior markets are as follows: Unwashed fine, 14¢@15c; washed fine, 19¢@20c; unwashed medium, 18¢@20c; washed medium, 22¢@25c per lb.

HIDES.—No change in the range of prices. Quoted as follows: No 1 green, 7½c; No 2 green, 6½c; No 1 cured, 9c; No 2 cured, 8c; No 1 green calf, 10c; No 2 green calf, 8½c; No 1 kip, 7½c; No 2 kip, 8c; sheepskins as to wool, 40¢@70c; shearings, 10¢@50c.

PROVISIONS.—Barreled pork and lard are lower; no other changes. Quotations are as follows: Mess pork, \$9.75 per bbl; short cut mess, \$11; short clear, \$11; corn pound lard, 4½c; family lard, 4½c; kettle lard, 6c; smoked hams, 8¢@8½c; bacon, 8¢@8½c; shoulders, 5½c; picnic hams, 5½c per lb.

COFFEE.—Market steady and unchanged. Quotations are as follows: Roasted Rio, ordinary 9c, fair 11c; Santos, good 14c, choice 18c; Maracabo, 20¢@25c; Java, 26¢@30c; Mocha, 28¢@32c; package coffee sold on the equality plan on a basis of \$3.50@10.50, less 75c per 100-lb case in New York.

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

December 15, 1898.

CATTLE.

Cattle receipts up to noon Thursday, 570, as compared with 676 one week ago. The quality averaged better to-day. Market opened fairly active; early sales were made at about last week's prices, but the close was rather slow and weak. \$5.00 was top price to-day for a choice steer weighing 1270 lbs. and \$4.65 for two averaging 1185 lbs. with quite a number of good butcher steers av 1100 to 1200 lbs at \$4.50; but the bulk sold at prices ranging from \$3.25 to \$4.90; canners, common to fair butcher cows, and common thin mixed lots, \$1.25 to \$3.00; bulls, good shippers, \$3.30 to \$3.50; light to good butchers, \$2.50 to \$3.25; stockers and feeders, \$3.00 to \$3.85. Veal calves—Receipts, 32; one week ago, 81; fairly active but lower; sales at \$5.00 to \$6.00 per 100 lbs, mostly \$5.00 to \$5.75. Milch cows and springers active; tops brought \$55.00; bulk at \$35.00 to \$45.00 each. Young sold Caplis & Co 2 heifers av 755 at \$4.

Cushman sold Jerow 3 cows av 1066 at \$3.25, and 20 mixed butchers to cook av 842 at \$3.75.

Weeks sold Mich Beef Co 15 mixed butchers av 623 at \$3.25, 2 do av 775 at \$3.60, and 2 do av 865 at \$3.50.

Ed Clark sold Sullivan 2 steers av 1165 at \$4, 6 mixed av 700 at \$3.40, and 3 cows av 1105 at \$3.25.

Blair sold Caplis & Co a choice steer weighing 1270 at \$5, 3 mixed butchers av 866 at \$3.10, and a bull to Robinson weighing 1990 at \$3.20.

Clark sold Sullivan 2 steers av 815 at \$3.50 and 6 mixed av 856 at \$3.75.

Jackson sold Caplis & Co 4 steers av 1237 at \$4.50 and 2 heifers av 705 at \$3.50.

Spicer & M sold Bussell 8 steers and heifers av 956 at \$4.10.

Haley sold Mich Beef Co 4 steers av 1167 at \$4.65, 3 mixed butchers av 740 at \$3.50, and a bull weighing 1290 at \$3.

Heaney sold Sullivan 2 steers av 1185 at \$4.65, 3 heifers av 890 at \$4.25 and 1 do weighing 730 at \$4.

Rook sold Mich Beef Co 3 steers av 1230 at \$4.15.

Pinkney sold Caplis & Co 5 mixed butchers av 894 at \$3.80 and 2 do av 827 at \$2.75.

Hawley sold Mason & F 2 steers av 995 at \$4.25.

Ackley sold Caplis & Co 4 mixed butchers av 607 at \$3.15, a bull weighing 610 at \$2.75, and 12 steers and heifers to Fitzpatrick av 1063 at \$4.20.

Spicer & M sold Applebaum 7 mixed av 857 at \$3.15.

Reason sold Mason & F 2 canners av 1025 at \$2, and a bull weighing 1710 at \$3.50.

E O Knapp sold Kammen 10 mixed butchers av 678 at \$3.25, and 6 mixed stockers to Jackson av \$4.41 at \$3.

Dennis sold Mich Beef Co a bull weighing 1940 at \$3.50, 16 steers and heifers to Caplis & Co av 882 at \$3.55, and 4 mixed butchers av 732 at \$3.

Dennis sold Mich Beef Co 15 steers av 1290 at \$4.30, and a cow weighing 1200 at \$3.

Ackley sold Sullivan 3 cows av 1020 at \$2.50, 1 do weighing 1000 at \$3.25, and a steer weighing 670 at \$3.25.

Burden sold Regan 6 mixed butchers av 670 at \$3.35, 2 steers to Mich Beef Co av 925 at \$4, 2 do av 900 at \$4, and 9 mixed butchers av 759 at \$3.50.

Glenn sold Fitzpatrick 24 mixed butchers av 981 at \$3.25, 7 mixed to Jackson av \$3.25.

SHEEP AND LAMBS.

Receipts Thursday, 1,617; one week ago, 897. Market opened active; early sales made at strong last week's prices, but the trade was rather slow and weak. Range of prices: Good to choice lambs, \$5.00@5.25; yearlings and good mixed lots, \$4.00@4.75; fair to good butchers, \$3.00@3.90; culls and common, \$2.00@2.90.

James Hawley sold Fitzpatrick 44 lambs av 92 at \$3.25, and 14 sheep av 90 at \$3.00.

H J Ackley sold Mich Beef Co 58 lambs av 80 at \$4.80, and 35 sheep av 90 at \$3.65.

Berger & T sold Hiser 80 mixed av 80 at \$2.75, and 32 to Monaghan av 90 at \$4.00.

W J Lomason sold Young 47 sheep and lambs av 85 at \$4.50.

B D Taggart sold same 18 lambs av 100 at \$3.25.

Aldrich & H sold Mich Beef Co 92 mixed av 85 at \$3.40.

F Reason sold same 59 mixed av 80 at \$3.25.

G H Mayers sold same 49 mixed av 80 at \$3.05, and 33 do to Hiser av 60 at \$3.00.

F Kelsey sold Monaghan 51 sheep av 90 at \$2.85.

Thos Robb sold Fitzpatrick 50 lambs av 85 at \$3.25.

Johnston sold Mich Beef Co 29 most lambs av 72 at \$4.60.

HOGS.

Receipts up to noon Thursday, 6339, as compared with 7126 one week ago. The quality was not very good—too many pigs and lights mixed in the lots. Market opened rather slow, later trade was active; good mixed butchers strong to 6c higher; pigs very dull and 10 to 15c lower; not wanted. Range of prices: Fair to good mixed butchers, \$3.22½ to \$3.32½, mostly \$3.25 to \$3.30; pigs and light hogs, \$2.90 to \$3.10; light pigs and skips, \$2.80 to \$3.10; stags, one-third off; roughs, \$2.50@2.65.

Hanna sold R S Webb 20 av 151 at \$3.20.

Bell sold same 7 av 216 at \$2.20.

W Spicer sold same 43 av 178 at \$3.25.

Hawley sold same 33 av 183 at \$3.30.

Harger sold same 121 av 168 at \$3.30.

Bunnell sold same 152 av 188 and 15 av 158 at \$3.32½.

McDonald sold same 13 av 158 at \$3.30.

Sweet sold same 104 av 179 at \$3.30.

Coggs sold Parker, Webb & Co 104 av 152 at \$3.25.

Davies sold same 74 av 196 at \$3.30.

Campbell sold same 10 av 141 at \$3.20.

Mayers sold same 27 av 191 at \$3.25.

Knapp sold same 21 av 191 at \$3.30.

Kalahar sold same 65 av 214 at \$3.30.

Ackley sold same 69 av 193 at \$3.30.

Kelsey sold same 33 av 208 at \$3.30.

Dennis sold same 131 av 202 at \$3.30.

Bergen sold same 50 av 180 at \$3.25.

Frazel sold same 87 av 172 at \$3.25.

Youngs sold same 68 av 176 at \$3.25.

Haley Bros sold same 68 av 176 at \$3.25.

Spicer & M sold same 69 av 154 and 60 av 202 at \$3.30.

Heaney sold same 34 av 204 at \$3.25.

Taggart sold same 153 av 170 at \$3.30.

Meehan sold same 130 av 160 at \$3.22½.

Brophy sold same 78 av 184 at \$3.30.

Bandfield sold same 155 av 165 and 134 av 181 at \$3.27½.

Belhimer sold Hammond, S & Co 78 av 200 at \$3.25.

Clark & B sold same 32 av 224 at \$3.32½.

Taft & Tubbs sold same 19 av 216 at \$3.32½.

Lomason sold same 101 av 158 at \$3.25.

Stephens sold same 162 av 155 at \$3.25.

Cushman sold same 125 av 195 at \$3.25.

Lingeman sold same 34 av 230 at

and 2 do av 780 at \$2.65, 2 steers to Sullivan av 840 at \$3.00, 3 cows av 1,150 at \$2.85, 5 steers av 1,040 at \$3.75, 3 steers av \$2.85 at \$3.40 and a bull weighing 1,870 at \$3.50, 3 heifers to Park, Davis & Co av 680 at \$3.30, 12 mixed butchers to Fitzpatrick av 972 at \$3.00 and 2 heifers av 900 at \$4.00, 2 cows to Lewis av 1,130 at \$3.00 and 6 stockers av 686 at \$3.45.

Bullen sold Caplis & Co 5 steers av 1,290 at \$4.65, 1 do weighing 1,080 at \$4.00 and a cow weighing 970 at \$3.00.

Burden sold same 8 steers av 1,073 at \$4.40.

SHEEP AND LAMBS.

Receipts Friday, 502, as compared with 321 one week ago. Market slow; lambs sold 20 to 25c lower; top price for lambs today 6c balance as noted.

Roe & Holmes sold Sullivan Beef Co 61 mixed butchers av 83 at \$3.50, 47 sheep and lambs to Robinson av \$2 at \$4.50, 85 do to Mich Beef Co av 80 at \$3.90, 33 do av 88 at \$4.75 and 58 do to Monaghan av 72 at \$3.75.

Spicer & M sold Caplis & Co 25 sheep and lambs av 60 at \$4.35 and 14 lambs av 88 at \$4.90; also 27 sheep and lambs to Sullivan Beef Co av 75 at \$4.55.

Thos McCloughrey sold Fitzpatrick 50 lambs av 83 at \$5 and 30 sheep av 112 at \$3.60.

Luckie sold same 43 lambs av 96 at \$5.

Burtiers & A sold Mich Beef Co 40 lambs av 90 at \$5.

Horne & R sold same 75 lambs av 90 at \$4.90.

Reason & D sold same 58 lambs av 77 at \$4.90.

Eddy sold Young 15 lambs av 95 at \$5.

F A Baker sold Mich Beef Co 17 sheep av 104 at \$3.25.

Eddy sold same 21 mixed av 93 at \$2.75.

HOGS.

Receipts Friday, 5,723, as compared with 6,173 one week ago. Market active and strong to 2½c higher than prices paid yesterday, or 5 to 7½c higher than prices paid one week ago. Best lots brought \$3.35, bulk at \$3.25 to \$3.32½; good pigs and light hogs sold better to-day; range, \$3.10 to \$3.22½; all sold; closing steady.

Discher sold Sullivan 80 av 159 at \$3.25.

Allen sold same 37 pigs av 98 at \$3.

Roe & Holmes sold same 34 pigs av 105 at \$3.10 and 21 av 89 at \$3.15.

Carman sold same 49 pigs av 114 at \$3.15.

Brewer & B sold same 96 pigs av 109 at \$3.15.

Hauser sold same 46 pigs av 119 at \$3.17½.

Stecker sold Parker, W & Co 54 av 179 at \$3.25 and 40 av 229 at \$3.30.

Eddy sold same 150 av 197 at \$3.30.

Brewer & B sold same 73 av 212 at \$3.32½.

Reason & D sold same 71 av 161 at \$3.25.

Eddy sold same 115 av 207 and 83 av 209 at \$3.30.

Richmond sold same 55 av 186 at \$3.30.

Hauser sold same 89 av 207 at \$3.32½ and 89 av 173 at \$3.30.

Bachert sold same 16 av 136 at \$3.15.

Parsons & H sold same 153 av 169 and 47 av 190 at \$3.30.

Leach sold same 53 av 206 at \$3.30.

Smith sold same 61 av 180 at \$3.25.

Lcvevell sold same 83 av 178 at \$3.25.

Stabler sold same 60 av 187 at \$3.30.

Astley sold same 105 av 194 and 47 av 207 at \$3.30.

Luckie sold same 178 av 165 and 172 av 182 at \$3.25.

Hynes sold same 34 pigs av 89 at \$3 and 29 av 154 at \$3.25.

Talmage sold same 119 av 178 at \$3.32½.

Astley sold same 86 av 144 at \$3.20.

Good sold same 12 av 164 at \$3.25.

Roe & Holmes sold same 51 av 198, 173 av 175, 45 av 227, 164 av 173, 129 av 175 and 84 av 158 all at \$3.30.

Horne & R sold Hammond, S & Co 60 av 181 at \$3.30.

F. W. Horner sold same 100 av 185 at \$3.30.

Roe & Holmes sold same 72 av 181 and 83 av 161 at \$3.30.

Eddy sold same 143 av 214 at \$3.32½.

Roe & Holmes sold same 114 av 121 and 67 av 119 at \$3.22½.

Roe & Holmes sold Hammond, S & Co 86 av 167 at \$3.25.

Armstrong sold same 116 av 201 at \$3.35 and 28 av 131 at \$3.20.

O'Hara sold same 50 av 191 at \$3.27½.

Roe & Holmes sold same 83 av 161 at \$3.30 and 55 av 177 at \$3.25.

Cassey sold same 84 av 208 at \$3.35.

Bullen sold same 40 av 168 at \$3.22½.

Underwood sold same 107 av 184 at \$3.32½.

Leidel sold same 73 av 221 at \$3.32½.

McCloughry sold same 77 av 185 at \$3.30.

Jedele sold same 125 av 186 at \$3.27½.

Allen sold same 44 av 174 at \$3.30.

Roberts & S sold same 130 av 179 at \$3.30.

Morrison sold same 74 av 212 at \$3.30.

Judson sold same 19 av 106 at \$3.00.

Reed sold same 69 av 178 at \$3.25.

Roe & Holmes sold same 88 av 202 at \$3.35.

Fox & Bishop sold same 109 av 220 at \$3.30.

Carman sold Parker, Webb & Co 71 av 187 at \$3.25.

OUR BUFFALO LETTER.

East Buffalo, December 15, 1898.

Cattle.—Receipts of cattle on Monday last were 5,090, as compared with 5,368 the same day last week. Shipments were 3,960 as compared with 3,564 the previous week. Monday the market was not very active, but prices held about steady for good fat cattle of all weights, but slow and easier for bulls, heifers, and common steers. Fancy Christmas steers, \$5.75@6.20; prime to extra steers, \$5.35@5.65; good to choice shipping steers, \$5.15@5.25; good to choice fat medium to fairly good shipping steers, \$4.90@5.10; coarse rough steers, 1,000 to 1,400 lbs, \$4.25@4.60; fat smooth dry-fed do, 1,010 to 1,150 lbs, \$4.50@4.75; do light steers, 900 to 1,000 lbs, \$4.25@4.45; green steers, half fattened, 1,000 to 1,400 lbs, \$3.75@4.25; fair to good steers, \$3.75@4.25; choice to smooth fat heifers, \$3.90@4.50; fair to good fat heifers, \$3.25@3.75; mixed lots, fair to good quality cows and heifers, \$3@3.50; common lots of mixed cows and heifers, \$3@3.50; common lots of mixed cows, heifers and thin steers, half fat, \$3@3.50; fair to good butchers' cows, \$2.75@4; common old to fair cows, \$2@2.75; bulls, common to good, \$3.25@4.15. Tuesday the market was dull, and on some grades slightly lower. Wednesday, with few on sale, the market

was dull and weak, with only good to prime cattle showing any activity. Quotations closed at the following range: Export and Shipping Steers.—Fancy Christmas steers, \$5.75@6; prime to extra choice finished steers, \$5.50 to 1,550 lbs, \$5.35@5.65; prime to choice, steers, 1,300 to 1,400 lbs, \$5@5.25; good to choice, fat steers, 1,250 to 1,300 lbs, \$4.70@4.90; good to choice fat smooth steers, 1,050 to 1,200 lbs, \$4.30@4.60; green coarse and rough fat steers, 1,050 to 1,400 lbs, \$4@4.40. Butchers and Native Cattle.—Fat smooth dry fed steers, 1,050 to 1,150 lbs, \$4.40@4.65; fat smooth dry fed light steers, 900 to 1,000 lbs, \$4.25@4.35; light to fair dry fed steers, \$4.10@4.30; green steers, thin to half fattened to 1,000 to 1,300 lbs, \$4@4.25; fair to good half fat steers, 900 to 1,000 lbs, \$3.90@4.15; choice smooth fat heifers, \$4.40@4.60; fair to good fat heifers, \$3.75@4.35; light, thin, half-fat heifers, \$3.35@3.65; mixed lots, fair to choice quality fat cows and heifers, \$3.25@3.65; choice to extra smooth, well fattened butcher cows, \$3.40@3.90; fair to good butcher cows, \$2.95@3.25; common, old shelly cows, \$2@2.50. Native Stockers and Feeders.—Feeding steers, good style, weight and extra quality, \$3.75@4; feeding steers, common to only fair quality, \$3.40@3.50; good quality yearling stock steers and calves, \$3.70@4; stock heifers, common to choice, \$2.75@3; stock steers, culled and throw-outs, \$3@3.25. Thursday the market was dull for all but good to fancy steers.

Sheep.—Receipts of sheep and lambs on Monday last were 13,000, as compared with 13,000 the previous week. Shipments were 13,200, as compared with 10,600 the previous week. Monday the market opened slow and lower on lambs, the decline being fully 15c@25c per hundred as compared with the close of the week. Sheep held about steady owing to the light supply. Native lambs, choice to extra ewes and wethers, sold at \$5.25@5.35; fair to good, \$5.10@5.20; culs and common, \$3.75@5; common to choice yearlings, \$4.25@4.60; native sheep, choice to selected wethers, \$4.40@4.50; fair to choice mixed sheep, \$4@4.30; good to choice fat ewes, \$3.55@4; culs and common ewe sheep, \$1.75@3.25. Tuesday lambs were slow, but prices did not change; sheep quiet and steady. Wednesday the market was again slow and generally lower on lambs, while sheep were dull and unchanged. Quotations were as follows: Native lambs, choice to extra ewes and wethers, \$5.10@5.30; fair to good, \$4.90@5.10; culs and common, \$3.25@4.75; common to choice yearlings, \$4.25@4.60; native sheep, choice to selected wethers, \$4.40@4.50; fair to choice mixed sheep, \$4@4.50; good to choice fat ewes, \$3.35@4; culs and common ewe sheep, \$1.75@3.25.

Thursday the market was slow but firmer for strictly good lambs, which sold up to \$5.25@5.35, and \$3.75@5.20 for common to choice. Sheep and yearlings quiet but steady.

Hogs.—Receipts of hogs on Monday were 30,180, as compared with 29,140 for the same day last week. Shipments were 17,100, as compared with 21,850 for the same day last week. While receipts on Monday were not heavy, the demand was not good enough to improve values, and prices were easy at Saturday's range. A few loads, running from 125 lbs. up, averaging 170 to 175 lbs, sold at \$3.55; yorkers, \$3.50@3.75, and a few at \$3.40; medium, \$3.40@3.45; prime heavy, \$3.45; pigs, \$3@3.25. Tuesday market ruled steady for everything but pigs and roughs, which were a shade lower, while yorkers showed an advance, selling at \$3.40@3.45. Wednesday, with light receipts, the market opened active and higher for good grades, and a shade to a nickel higher for yorkers and pigs. Quotations were as follows: Good to choice yorkers and light mediums, 165 to 190 lbs, \$3.50@3.55; prime light to fairly good weight yorkers, \$3.35@3.45; mixed packers grades, \$3.50@3.55; heavy hogs, 250 to 300 lbs, \$3.35@3.65; fair to choice, \$3.30@3.35; skips, common to fair, \$3@3.25; roughs, \$2.90@3.10.

Thursday the market was lower; yorkers sold at \$3.40@3.45; mixed, \$3.45; mediums, \$3.45@3.50; good heavy, \$3.50@3.52½; pigs steady to strong, \$3.30@3.40.

THE CHICAGO MARKET.

Chicago, December 15, 1898.

Cattle.—The receipts of cattle in this market last week were 54,060, as compared with 52,273 the previous week, and 46,995 for the same week last year. Monday the good to fancy grades of steers, such as sold last week at \$4.75@6.10, ruled quite steady, and perhaps a little stronger, while common to fair were weak to 10c lower. Native butcher stock ruled steady, but Texas cattle sold 10c lower. Four loads of 1,314@1,475-lb Christmas beeves sold at \$5.90@6.10, with 1,218-lb yearlings at \$5.85, and steers averaging 1,721 lbs at \$5.75. About 20 loads sold above \$5.50; disillery-fed steers, 1,230 lbs, \$4.75; corn-fed Texas, 865@1,069 lbs, \$3.85@4.40; straight Texas, 887@1,073 lbs, \$3.40@3.95; native butcher stock, \$2@4.75, and calves, \$4.50@6.50. Tuesday, while receipts were much lighter than last week, prices were not influenced by that fact. No choice or extra cattle were on sale. Perhaps the class of fair to good steers was somewhat stronger than on Monday. There was also a better demand for stockers and feeders. Wednesday, with quite light receipts, ordinary fair cattle were no higher, but prime Christmas beeves were in good demand at strong to slightly higher prices. The top price on actual sales was \$6.75 for a few prime av 1,600 lbs, and good to extra brought \$5@6.25 per hundred; fair to good, \$4@4.90; common steers, \$3.35@4; cows, \$2.50@4; heifers, \$2.25@4.50; bulls, \$2.40@4.10; calves, \$3.60@6.60. Up to Wednesday night receipts for the week were 25,505, as compared with 41,989 for the same days last week.

Thursday the market ruled strong to 10c higher; steers, \$3.90@6; cows and heifers, \$2.00@4.65; Texas steers, \$3.30@4.25; stockers and feeders, \$2.80@4.20.

Sheep.—Receipts of sheep in this market the past week were 67,325, as compared with 70,824 the previous week, and 70,824 for the corresponding week in 1897. Monday the market opened very dull, with sheep and yearlings lower, and lambs barely steady. Most of the lambs sold ranged from \$4.50@5.10, with a few fancy bringing \$5.25 per hundred. Culled and old ewes sold at \$2.30@2.50; bucks, \$2.50@3.25; market ewes, \$3.50@3.75; market wethers, \$3.90@4; native and Mexican yearlings, \$4.25@4.50; common lambs, \$4.25@4.50; something

a little better than common, \$4.75@4.85; fair to good, \$5@5.10; tops, \$5.20@5.25, and only a few at that. Tuesday the market was in better shape, especially for lambs, which sold up to \$5.40, which price was paid for 110 fancy av 102 lbs, with most of the offerings selling at a range of \$4@5.20; sheep and yearlings, \$3@4.40. Wednesday the market was weaker, and values as a rule were lower than on Monday. Culled, old ewes, and poor stuff, sold at \$2.30@2.75; market ewes, \$3@3.75; market wethers, \$4@4.10; yearlings, \$1.50@4.65; common market lambs, \$4.25@4.50; fair, \$4.90@5; something better, \$5.10@5.25; tops, \$5.30@5.40. No sales of feeding lambs.

Hogs.—The receipts in this market the past week were 262,344, as compared with 272,741 the previous week, and 224,063 for the corresponding week in 1897. Monday the market opened strong and most of the offerings sold 2½@5c higher. After 10 o'clock the feeling weakened and most of the advance was lost, yet only 5,000 remained in the pens, and the provision market closed higher. Packers bought freely from the start, while the few shipping orders were filled early in the day. The quality of the offerings was generally good, with "good" heavy more plentiful. Sales were at \$3.25@3.50, bulk \$3.37½@3.45; pigs \$2.75@3.40, bulk \$3.20@3.30. Receipts were about 13,000 more than on Monday of last week. Tuesday, with heavy receipts, the market opened active and strong to 5c higher. Roughs sold at \$3.20@3.35; prime packers and good mixed, \$3.40@3.47½; prime medium, selected butcher-weights and shippers, \$3.45@3.52½; one load at \$3.55. Light bacon grades, 150 up to 220, to average 175@180 lbs, sold at \$3.40@3.45. Averages of 130@140 lbs, \$3.40@3.45; pigs of 90@100 lbs, over or under, \$3.15@3.25. Wednesday business was very slow, and as shippers were not in the market packers were able to force down values. Rough packers sold at \$3.15@3.25; fair to good mixed and packers, \$3.35@3.45; prime mediums, selected butcher weights, and assorted shippers, \$3.40@3.45; a few loads at \$3.50; light mixed bacon weights, \$3.37½@3.40; light-light of 120 lbs up to 150 lbs average, \$3.35@3.40; pigs of 100 lbs, over or under, \$3.15@3.25. Up to Wednesday's close, receipts this week have been 42,997, as compared with 46,419 for the same days last week.

Thursday estimated receipts were 15,000, and the market ruled slow and 5c lower; light, \$3.20@3.35; mixed, \$3.25@3.37½; heavy, \$3.20@3.42½; rough, \$3.20@3.35; yorkers, \$3.30.

WANTED—Cattle and Horse Hides and Furs TO TAN.
Old robes re-lined. Furs made to order.
W. W. WEAVER, CUSTOM ROBE TANNER, Reading, Mich.

STATE CROP REPORT FOR DECEMBER.

The average condition of wheat in the State, December 1, was 100, comparison being with average years. The percentages by sections are as follows: Southern counties 101, central, 97, and northern 98. One year ago the percentage for the State was 88, southern counties 84, central 91, and northern 101.

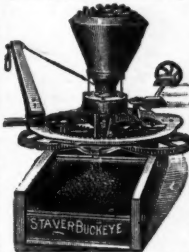
Fine growing weather prevailed nearly all the fall, and wheat has made unusual fall growth, but correspondents very generally report the plant looking yellow at the time snow came, and are not certain as to the cause. A large proportion believe it due to insects, principally Hessian fly, and others to exclusively wet weather. The ground has been lightly covered with snow much of the time since about the middle of November.

The total number of bushels of wheat reported marketed by farmers since the November report was published is 1,864,611, and in the four months, August, September, October and November, 7,830,566. This is 163,250 bushels more than reported marketed in the same months last year.

Fall pasture was remarkably good until late in the season. In answer to the question regarding fall pasture, 422 correspondents report "good," 171 "average," and only 43 "poor." The condition of live stock is practically a full average. The figures are: horses and cattle, 97; sheep, 98; and swine, 96.

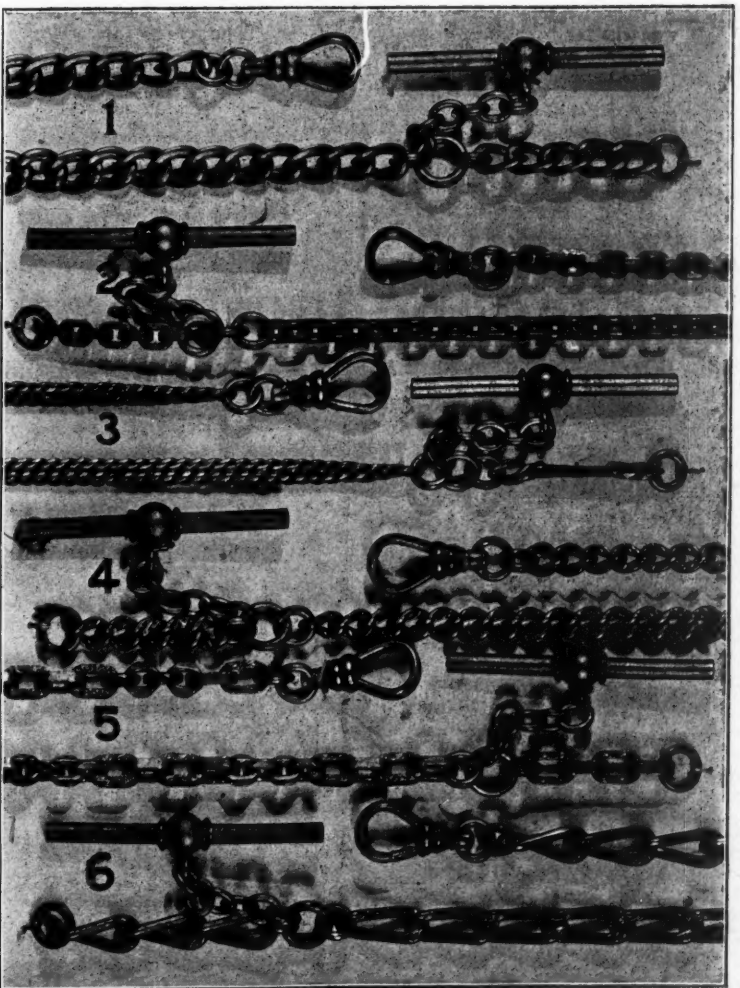
In answer to the question, "Are there any diseases prevalent among live stock?" 62 correspondents in the State answer "yes," and 533 "no."

A very good and convenient feed grinder is the Buckeye which is advertised regularly in these columns by the Staver Carriage Company of Chicago, Ill. It possesses special advantages from the reason that it has a power attached and does not necessitate the purchase of an additional power. Then too it is so arranged that it can transmit power to other machinery with a shaft and pulley. This enables a man to not only grind feed, but to shell corn, saw wood, pump water, cut feed, etc., at the same time. Write these people mentioning our paper and they will take pleasure in sending you their latest catalogue.



EGGS
Send consignments of Eggs, Butter, Poultry, Game, Fruit, etc., to
CAWLEY BROS. & CO.,
Commission Merchants, - Detroit, Mich.
PROMPT RETURNS. REFERENCE—MICHIGAN FARMER.

A 15-YEAR GUARANTEED ROLLED GOLD PLATE CHAIN ONLY \$1.75.



A handsome watch chain makes a most acceptable Christmas gift and our illustration shows six handsome styles which we are offering for only \$1.75 each, postpaid. The links, bars and swivels are shown full size and chains are full 18 inches long, but to save space part of the center links are not shown. These are finest quality rolled plate, very latest designs, guaranteed for 15 years, and your money back if not exactly as we represent them to be. They are not cheap, shoddy chains made only to sell, or we would not handle them, but are in every way reliable and of standard make. We know exactly what jewelers have to pay for this grade and you cannot buy one from them for less than from \$2.25 to \$3.00.

Order by number. The chains are sent direct from our office by registered mail and as all orders are filled the day received, you may be sure of getting them in time for Christmas. Address

THE MICHIGAN FARMER, Detroit, Mich.

Miscellaneous.

"THE RED CROSS."

Make way! along the crackling lines
A footstep falters—a red cross shines;
And under the palm trees, mounting
high
A pitying presence hastens by.
It stops by the thicket, it kneels by the
stone—
It bends its step to the breath of a moan,
It stirs the bugles and ruffles the
drums—
Make way! the Red Cross angel comes.

Make way! the angry cannon's breath
Is shrill with the singing sickle of death;
It halts not her—at the head of the line
Her cross gleams red; and lo! at the sign
A lull comes down where batteries
crashed;

A pause where volleying trenches flashed.
"What ho!" the trumpet calls to the
drums—
"Make way! a pitying angel comes."

Make way!—in mercy's name, make way!
A hero faints in the thick of the fray;
Would ye stay his hope of a last good
cheer?

Make way! a nation's pity is near—
A healing pity that understands,
That speaks in the stroke of two soft
hands;
Would ye hold its aid from hearts that
bleed?

Make way! the Red Cross comes at
need.

Make way! ye friends and faltering foes;
A balm she brings for your common woes.
She reads your ills by the light of the
stars,

Your bread she brings to the prison bars;
Her guards are they of the shadowy
mien—
The spirit hosts of the Nazarene.

Her walks—the ways of the troops are
they—
Make way in the name of the Cross,
make way!

—Frank Leslie's Popular Monthly for De-
cember.

THE LOVER'S QUEST.

BY ERNEST GLANVILLE.

Author of "The Lost Heiress," "The Fossilizer,"
"A Fair Colonist," "The Golden Rock," &c.

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(CONTINUED)

CHAPTER XXV.

Miles looked expectantly towards the door. He had been thinking much of her, with a great feeling of pity for the worn and tired little girl stranded alone among dangers in a wild country remote from friends. Besides the hold she had made on him by her courage, there was another link that bound her to him in his own mind.

It was on her behalf he had, after all, ventured everything in leaving England, though knowing nothing of her existence. She had taken the place of the girl he had seen in Wales. That exquisite fragment of a romance had faded into a background as misty as the early morning in the Welsh mountains, and though he would never forget that incident, yet he could not hope now ever to see her again. He had come, following the slightest thread in search for her, only to find in her place another as desolate, as much in need of assistance as he had imagined her to be.

He pitied this latest girl. She was so frail, and so much in need of tenderness, and he admired her, too, for her spirit. These two feelings uniting were enough to inspire in him a deep and growing interest, an interest which he persuaded himself partook of brotherly affection.

So he waited, thinking, with his eye fixed on the door ready to receive her as an old friend, an elder brother, perhaps, when the door opened, and he stood hesitating without a word, but with a fixed stare of wonderment.

He had never thought of her appearing in woman's clothing. He had in his mind the figure of a slight, white-faced lad, with large, sad eyes, ringed with black, and a small, sensitive mouth; and here, framed in the low door, was a girl in a white dress, simple enough, but changing her so much that he scarcely knew it was she. Changed indeed she was. There was a slight color in the cheeks, replacing the deathly pallor, the mouth no longer drooped, and about the corners of the lips there was a ghostly smile reflected in the clear, bright eyes.

So they stood and looked, and in her eyes, too, there came a look of wonder, while the color mounted on her cheeks, for if she had altered, so had he since she last saw him. Then he was ragged, black, with a rough beard, a haggard look, and eyes bloodshot from want of sleep. He had stooped, too, as he limped with his boots broken, and never looked his height.

This man was quite changed. He looked trim and tall, a little worn still, his hands were rough and raw on the

knuckles, and his skin almost dark, but his face was smooth and handsome.

They looked each other over, and he no longer felt that he would play the brother.

With a smile of unfeigned pleasure and delight he stepped towards her, recovering from his surprise.

"Why," he said, "you are changed. I am so glad to see you looking so much better."

His voice was different, too. It was no longer hoarse from exposure. She started back with her hands raised, and a look of greater wonder in her eyes.

"Why," he said, "you surely recognize me?"

"I think so," she murmured, with a rising color, "but how strange. To think that we should meet here, and not know each other."

His hand fell to his side and he caught his breath at the awful idea crossed his mind that her brain had succumbed to the strain of the last few days.

"I really believe," she said, "that you do not know me after all."

Something in her voice this time caught his attention, something, too, in the way she tossed her head.

"Gracious Heavens!" he cried, after one swift look. "You are Miss Stern-dale."

She laughed and blushed, and he stood silent, looking.

"Of course," she said, "and to think we should have been together all these days without either of us finding it out."

"I was puzzled sometimes when I looked at you," he said slowly, scarcely knowing what he was saying. "But you looked so—"

"And you were like a tramp, the most awful example of poverty and neglect I think I ever saw, with a voice that terrified me. I am sure I could not have looked so much changed."

"But you called yourself Miss Wentworth," he said.

"Ah! that is a long story. Where is my father?"

"He escaped from this place when it was captured."

"Captured! I thought we were in the hands of friends."

"So we are, inasmuch as they are fighting against a common enemy," and he explained the position after briefly referring to his former meeting with the Arab at Zanzibar.

"Groote Adriaan went to Zanzibar. I wonder if he met you there?"

"I think I saw him," said Miles, grimly. "I had business to do with him, and his methods were somewhat peculiar."

She grew red, and he of course at once put it down to resentment at his reference to Adrian, or Stoffel, by whatever name the big scoundrel passed under.

"He is not a man to be trusted," he said, coldly.

"My father trusted him," she answered in a low voice, with a look of trouble, "and he risked his life for me."

For a moment Miles was tempted to show her the real character of this man, whom she evidently respected if she did not love, but he refrained. If he told her all he knew and suspected of the man's treachery, not only to herself but her father, the shock and horror of it would be too much for her to bear. He remained silent, frowning at his thoughts.

"And you," she said, looking up at him with tears in her eyes, "I cannot find words to thank you for what you did, and for your great kindness to a poor girl."

"And just now you said I was the most awful example of a tramp you ever saw."

She smiled through her tears, and he felt prompted then and there to fold her in his arms.

"Isn't it wonderful to meet you here? I can scarcely believe it yet."

"Does it please you?" he said, softly.

"To meet a friend in the wilderness? How can you ask? But how is it you came in this country?"

"In search of you," he said quickly.

"Of me?" she whispered.

"Yes. I returned to Wales to see you again, feeling that life held no dearer prize. You had gone; but chance gave me a slight clue, and I left for Zanzibar on business, as I hoped, with your father. I was met by another man, kidnapped, and escaped. Still hoping that I could not be mistaken in your father's name, I came on. There were many difficulties to overcome, but, thank heaven, I was right."

She stood silent, trembling.

"You do not ask why," he said. "But

you must know, Laura; it was love for you."

He bent his head to look into her eyes, and at the timid uplifting of them he took her in his arms. Outside there was the sound of firm steps, and as they stood apart the door opened.

"Peace be to you, my friends, and in the morning happiness," said the Arab, gravely. "But to-day the men must watch."

She came to the stoop to see them go, and Miles, looking back, saw her framed in the doorway, glancing timidly around at the fierce warriors, who suspended their occupations to dwell upon every point of her appearance.

"Do you think it is safe to leave the house?" said Miles, hesitating, with a newborn fear in his heart.

"If there were white men there, perhaps not," said the chief, darkly. "But were one of those Zulus to enter the house his comrades would slay him. What is the chief's is the chief's, and death to any who touches. If you fear, tell the girl to go in."

Before Miles could act she had stepped out, and had taken one strapping warrior by the arm, studying with concerned face a long ugly gash. Tearing a strip from her handkerchief, she bound it round, then seeing the wounded men in the shed, went thither as Miles came up.

"I think it would be better," he said, "if you kept indoors."

She smiled up at him.

"I am not afraid," she said. "These men respect those who do not fear them. Besides, I am an experienced nurse, and they want attention."

Miles looked along the row of men, who had borne their injuries in silence. Their black eyes, worn with fever, were fixed on the white girl, and behind her were a group of warlike figures, watchful and silent.

"Have no fear," she said. "These men need help," and she went down on her knees by the nearest man, whose left arm had been broken by a blow from a kerrie.

"God bless you!" he murmured, and, leaving her, ran off, while the men crowded in around her, making guttural remarks, and watching every action with the intentness of children.

He soon joined the Arab, who was walking to higher ground, accompanied by Hans, and Magana, whose high plumes of black feathers set off well his lofty stature. About four hundred yards from the house they stopped. They were then at the upper lip of the valley. To their right was the wood sheltering the enemy, whose position was marked by a haze of smoke and a small kopje rising above the trees. Stretching north was the long valley through which they must travel, narrowing at its further end to a defile guarded by several isolated masses of rock.

"It is there," said the chief, "they would attack us if we retreated. Can anyone see a sign of the enemy? He put this in Zulu to Magana, who looked fixedly at the distant rocks."

"People have gone that way," he said. "They left before sunrise. Maybe they are in wait beyond."

"Many?"

"Ou aye, a regiment."

"I can see no sign," said Miles, when this was explained.

"Ja, sieur, the Kaffir is right," said Hans. "Look there," pointing to the right. "There is a line on the hillside. That is the track the men made. The grass was wet when they moved, and they tramped it hard, the blades falling away from us pointing the way they went."

Miles looked keenly at the old hunter. "Ja, sieur. It is so. The sun shines bright on the flat of the grass lying away from us, showing it was beaten down that way. If the points were towards us we could not see the track."

"If men have gone that way," said the Arab, "it is to make an ambush for us in case we retreat; but to-night they will find that we also can plan and strike too."

They remained there long, mapping

out the country, and marking out the lines to be followed that night in the attack upon the main camp of the enemy in the thorns, and the reconnaissance to the end of the valley. It was decided that the sheikh was to lead the attack on the camp, while Magana was to proceed down the valley and, if possible, unmask the ambush which it was supposed had been formed. Miles, with one hundred men and the wounded, was to be left in charge of the house.

When they returned to the enclosure they were greeted by the sound of laughter, and saw three natives walking proudly up and down, each with a bandaged arm in a sling, and gesticulating with their uninjured limbs before groups of their admiring comrades. In the shade of the wall were seated several men with bandaged heads, while in the low shed itself, with her arms bare and skirts tucked up, was Laura, sewing up the edges of a terrible wound in a man's shoulder.

"Mash Allah!" cried the sheikh, gazing in astonishment at the slight figure, and at the men who stood around showing their white teeth. "This is a wonderful thing."

Laura looked up at the sound with a little frown.

"Are you the chief man?"

The Arab nodded gravely.

"What do you mean by leaving these men uncared for? They have fought for you well, and your first care should have been for them."

The Arab smiled in his beard.

"This place must be scrubbed out. I have told these men to do it, but they simply laugh, and the girl in the house can do nothing but wring her hands. Don't stare at me like that. Set them to work lest the flies and the evil smell of the place breed a sickness."

"Was any man ever talked to like this," muttered the chief, turning to Miles, who was all the time frowning at her, "but there is sense in her words."

He stalked away inside, while Miles begged her to go in and let him attend to the wounded.

"You can help," she said, giving him a wan smile, for the work had been terrible. "You cannot imagine how patient the poor things are. They have waited each man in turn, speaking nothing, but following me with their black eyes."

Miles was soon down on his knees, and then Hans, whose knowledge of rough doctoring was unequalled, went to work. His first patient, however, violently objected to be treated by him, and excitedly pointed at Laura, so that the old hunter was tempted to give up the work in disgust, but that Miles, knowing his skill, gave up his place.

The Arab returned with a bucket of lime, and Miles sprinkled this about. After this extra rations were served out, and the wounded men served with brandy and tobacco.

In the afternoon Miles set about strengthening the little fort. He was not at all sure that the sheikh's plans for scaring the enemy would succeed, and he saw that if Stoffel were warned in time of the departure of two parties from the camp he would probably deliver a counter attack, and at the same time cut off the raiders. He set a party of men to cut down stunted thorns, and after re-laying the wire at a distance of twenty yards, secured the thorns firmly to the wire, thus making an outer barrier. This done he decreased the space to be defended by running the north and south walls to an angle, its apex facing west. This work kept the bulk of the men employed till evening, when Magana, with twenty-five men, slipped away for his long night trip to the far end of the valley, with orders to surprise the enemy if he found him.

(Continued on page 473.)

TELEGRAPHY

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make a sudden attack, and then retire quickly.

An hour later the sheikh, with twenty-five men, left for the more dangerous enterprise of attacking the main body of the enemy in the woods.

Miles was left in command. He had had no opportunity of speaking alone with Laura since the morning, and now his anxiety was too great to permit any such indulgence. He saw the men at their posts, and was standing looking out into the night when a light touch fell on his arm. She was at his side with a light shawl over her head, and her eyes shining as he looked down into them. They paced to and fro in silence, she with her face to the stars, and he straining his ears for sounds out of the night.

"How peaceful and quiet," she whispered, standing still. "I don't remember to have felt before so fully the beauty and awe of the brooding sky and silent earth."

Still it was, beyond belief. The men stood to their position, indistinct, except for the gleam of their eyes; making no sound, and no stir came from without.

She sighed, and her hand fluttered on his arm, to suddenly lighten as a deep voice hailed them out of the dark and the stillness.

"Englander!" it called.

There was a sharp rattle of metal as the men brought their rifles to the wall. "Go inside, dearest," whispered Miles. Then louder: "Who calls?"

(To be continued)

HIS PHILOSOPHY.

Oh, de mule is in de traces an' he's doin' what be kin,
An' de white man keeps a-workin' all de day.
De way dey seems to was'e dese precious moments is a sin,
An' you'll nebbber kotch me doin' dat-a-way.
Dey look down on youh uncle an' dey says he's missed a heap,
But he's healthy an' he's happy an' he's strong,
'Cause dar ain't no time so busy but he manages to keep
A little while foh lazyin' along.
Oh, de greenbacks, dey kin rustle while de silver dollars shine;
But I'se saterfy to sing my little song.
I doesn't ax foh skeessly nuffin' in dis life o' mine
'Cept de privilege o' lazyin' along.

So it's go it, Mistuh Whiteman, an' it's go it, Mistuh Mule;
A-laborin' on, de most dat you know how.
You's bof a-makin' furrows when you might be keepin' ool,
De lines is in yoh fields, an' on yoh brow.
No matter if you's 'bout de finest guesser dat's alive,
When you guass a black man's age you guess it wrong.
He is jes' as young at sixty as he is at twenty-five,
'Cause he takes de time foh lazyin' along.
Dar's de speeshy in de mansion an' dar's co'n pone in de ash,
An' I's saterfy to sing my little song.
I is lookin' foh 'em-loyment, but I doesn't get too brash,
'Cause I's comf-able jes' lazyin' along.
—Washington Star.

TALKED HIM INTO PAYING.

There are some Indians, not many, keeping stores in the Territory. Most of the merchandising is done by white men. Formerly, says the St. Louis Globe-Democrat, when the wholesale house of the city supplied an Indian storekeeper on credit, it took long odds on his honesty, for until recently the red man could not be sued. Nevertheless in the past the losses were not so heavy as might have been supposed. A lawyer who had marked success with hard collections in the Territory told this as fairly illustrative of his experiences when Indians belonged to other nationalities and could not be reached by court processes:

"A certain house in St. Louis had been selling goods on credit to an Indian who went by the name of Mr. Tincup. Suddenly it lost track of the customer. At that time the St. Louis firm had credited him to the amount of nearly \$3,000. But while Tincup dropped out of the firm's knowledge, orders from the same place in the Territory began to come in from a customer who had never been heard of before, and who gave his name as Littlepidge. I was called upon to investigate the matter and to see what I could do with that claim of about \$2,800. When I arrived at the place I discovered that Tincup and Littlepidge were the same individual. I inquired what it meant. The Indian said he had got tired of Tincup and had adopted the new name.

"But don't you know you can't change your name that way?" I asked him. "Don't you know you are like-

ly to get into the penitentiary for such a thing as that?"

"The Indian said he didn't know he had violated any law. On investigation I learned that he hadn't. The law of his nation permitted him to change his name at will. I dropped that branch of the subject and got around to the question of collecting what the late Mr. Tincup owed. It was a hard job. The Indian couldn't be sued. I knew that, and so did he. I had nothing to stand upon but moral suasion. I tried bluffing. I went in on one line, and when I found I was making no impression upon the debtor there I tried another. I threatened and argued and coaxed. That was all I could do. I just kept at it until I persuaded Mr. Indian to make a settlement. The result was I carried back to my clients the bulk of the debt, but I got it through no help of the law. It was just a case of talking the Indian into the payment of part of his obligation. And that was the way we had to do business down here until the United States courts were given civil jurisdiction over the Indians."

HOW TO SEND CHRISTMAS PRESENTS.

The politest way to send Christmas presents, whenever it is possible to do so, is by hand, either by private or hired messenger.

The next best way is to send presents by express, always fully prepaid.

The next best way is to send them by first-class mail, preferably registered. Second, third and fourth class rates are cheaper, but if any writing is enclosed it subjects the second, third or fourth class mail to letter postage, and you suffer the humiliation of sending presents with "postage due." The postoffice authorities do not believe you when you say the unsealed package you send by second, third or fourth class postage contains no writing, whether it really does or not. All mail matter sent unsealed, or by anything but letter rates of postage, can be opened by the postoffice clerks, and is so opened. Of course an effort is made to handle the Christmas presents carefully and do them up again properly, but it stands to reason that busy clerks, opening thousands upon thousands of packages that pass through main post-offices, cannot re-tie them with anything like the care with which they were wrapped in the first place.

Therefore, if you desire to have your Christmas present reach its destination in the dainty style in which you start it on its way, wrap it in tissue paper, tie it with pretty ribbons, then wrap it securely in a box done up in brown paper, or at least put it in a heavy manila paper wrapping and tie securely, and send as first class matter.

Yes, it will cost a little more, but it is worth the difference to be certain that your gift will not arrive late, or imperfectly done up, if not soiled or crumpled outright.

Postal clerks are human and so they are often careless. It does not insure your holiday gifts going by first-class mail merely to pay letter rates on them. They look like second or fourth class mail if bulky and are likely to be handled as such, unless you write "First class" on each package conspicuously, and it is safer even then to use sealing wax prominently in securing the wrapper.

Put your own name and address on each package sent by mail or express, and, on account of the Christmas rush, allow from one to two days more than you ordinarily would for each article to reach its destination.—The Gentlewoman for December.

SOME FRESH ONES.

The Scottish Leader says that the former Lord Elphinstone's parish minister was a very scatter-brained theologian, and in his sermons often knew not the end from the beginning. One Sunday His Lordship, in his customary sleeping, gave vent to an unmistakable snore. This was too much for the minister, who stopped and cried: "Waken, my Lord Elphinstone." A grunt followed, and then His Lordship answered: "I'm no sleepin', minister." "But ye are sleepin'." I wager ye dinna ken what I said last," exclaimed the pastor. "Ou, ay," returned the Peer. "Ye said, 'Waken, my Lord Elphinstone.'" "Ay, ay," said the minister. "But I wager ye dinna ken what I said

last afore that." "Tuts," replied the nobleman, promptly, "I'll wager ye dinna ken yerself."

A Boston girl who witnessed an Indian sham battle at the Omaha exposition, says the Omaha World-Herald, thought she would try to talk to a young Indian brave sitting next to her. "Heap much fight," she said.

Lo smiled a stoical smile, drew his blanket closer about his stalwart form and replied:

"Yes; this is indeed a great exposition, and we flatter ourselves that our portion of the entertainment is by no means the least attraction here. May I ask who it is that I have the honor of addressing?"

The dear girl from Boston was thunderstruck. She blushed a rosy red—even Boston girls can blush when they thaw out—and hastily fled.

She had been addressing one of the Carlisle Indian school graduates.

A soldier who served in Cuba tells "The Boston Globe" that one night, after a march, it happened that a few of the boys pitched their tents in close proximity to the tent of an officer of another company. The boys were talking quite loud, as taps had not been sounded.

"Hush up out there!" shouted the officer, angrily.

"Who are you?" asked one of the boys.

"I'll show you who I am if I come out there!" was the answer.

The talking continued, and soon out came the officer. His anger was great, and he threatened to report the men to their colonel, winding up with: "Don't you know enough to obey an officer?"

"Yes," replied one of the boys, "and we should have obeyed you if you had had shoulder-straps on your voice."

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GRANGE CALENDAR.

Eaton County Pomona, with Charlotte Grange, December 21.
Huron County Pomona, with Verona Mills Grange, December 22.

THE OLEOMARGARINE LAW.

All of our readers doubtless know of the recent decision of our State Supreme Court that the law enacted by the Legislature of 1897 forbidding the coloring of oleomargarine to resemble butter is unconstitutional. It must be noticed, however, that the grounds for this decision were purely technical, and reflect in no wise on the purpose of the law itself. It seems that in some mysterious manner when the bill, after passing the senate and house, was ready for enrollment, it was noticed that it contained no enacting clause, and that this very necessary appurtenance was inserted by the clerk. The Supreme Court, doubtless with good reason, declares that this procedure was illegal.

While it is to be regretted that the law is inoperative we feel sure that its existence as an act has been a deterrent. Moreover, we can see no serious difficulty in the way of properly enacting a similar law at the coming session of the Legislature. It is probable that the oleomargarine manufacturers and their allies will strive to defeat such a measure, but it ought not to be a difficult matter, in spite of their opposition, to secure the passage of such a law.

This decision of the Court raises a question that is often discussed. Is there not some way of providing a careful examination of all bills which pass the Legislature, for the purpose of ascertaining beyond question whether such bills are technically correct? Certainly it is worth thinking of.

GRANGE NEWS.

POSTAL JOTTINGS.

The Eaton Co. Pomona Grange will meet with Charlotte Grange, Wednesday, December 21, in Carmel hall, over Bailey's store. Election of officers, report of delegates to State Grange, etc.—Chas. C. Hallenbeck, Master.

Danby Grange, Ionia Co., discussed "Foreign Relations of the Government." The sentiment was in favor of expansion in the new world; but there was a difference of opinion in regard to the Philippines. Grange instructed delegate to vote in favor of limiting county salaries, and in favor of repealing the sugar beet bounty, the latter with much opposition.—T. C. Pryer.

White Oak Grange, No. 241, Ingham Co., is in a prosperous condition. We have commenced our winter by organizing a literary club; our first study will be Whittier's "Snow Bound." An old-fashioned spelling match was held last Saturday evening with much interest.—Granger.

Tipton Grange, No. 165, Lenawee Co., held an interesting and instructive meeting December 3. A good literary program, including music, recitations and readings, was followed by quite a lengthy discussion of "Would it be a benefit to the United States to have the Philippine Islands annexed?" We also had some light refreshments and a good social visit.—A. W.

Courtland Grange, No. 563, Kent Co.—December 5 discussed the question, "United States Government." Grange passed resolutions on the death of Bro. John D. Bellows, a charter member, who died November 23, aged 78 years. Applications for membership and re-instatement were received.—Mrs. Nancy A. Burch.

Cadmus Grange, No. 703.—December 3 a large number of home Patrons and visitors from Madison Grange were in attendance. A resolution preparatory to incorporating the Grange was presented and adopted. Specifications for horse sheds were read. A fine program was rendered. A clothes-pin social was announced for Friday evening, December 9.—Dickie E. Tobias.

THE GRANGE IN OTHER STATES.

One of the sources of strength of the Grange lies in the fact that it is national in character. It represents all sections and all elements of the farming population. When the Grange of the nation speaks it means something.

It does us good to know what the Grange is doing in other states. We may from this knowledge get encouragement, suggestion, or perhaps warning. We have asked the various State Masters to state to us the achievements of the Grange in their states, and the present condition of the order, and the outlook. Not all have responded, but we publish such replies as have been received, knowing that they will be of interest and value.

CONNECTICUT.

In reply to your request will say that the Grange in the "Nutmeg" state is, on the whole, in a healthy and thriving condition. There is little territory left here for the organization of new Granges, so we are endeavoring to hold and strengthen those we have. Acting upon our suggestion at last state meeting, many of the Granges have dropped off delinquent and useless members, thereby reducing the membership, but greatly strengthening the organization.

More attention than usual has been given to Grange field meetings and fairs this season, thus favorably advertising the Grange to the thousands who have been in attendance. At one of these 224 pairs of oxen and steers were exhibited. Horse trotting and gambling were conspicuous by their absence.

National Master Jones visited us in August and addressed large meetings in various parts of the state. State Master Jewett, of Massachusetts; President Flint, of Storrs' Agricultural College, and Congressmen Henry and Russell, together with our state officers, assisted at these meetings, sowing much good seed.

It is expected that many of our Patrons will avail themselves of the rare opportunity that is offered to attend the meeting of the National Grange at Concord, receive the seventh degree, and participate in the social and intellectual features pertaining to the occasion.

We hope and confidently believe that the enthusiasm engendered by this meeting will be carried into all the Granges of the country that may be represented there, and that a new impetus may be given to the grand work of our noble order all along the line.

S. O. BOWEN, Master.

ILLINOIS.

The Grange interest is well maintained in Illinois. Although there have not been many Granges organized the past year, many of our old and well-established Granges have made large gains in membership. Our field work for the winter has just commenced, and workers are now in the field sowing the seed. We expect to reap a rich harvest in the near future in the organization and reorganization of Granges.

We are thoroughly convinced that the only permanent plan of organization is by first strengthening the Granges we now have, then enlarging the circle from each Grange, so that the new Grange can receive help and encouragement from those of greater experience.

Our Granges generally observe "Lecturer's hour," and the program is prepared in advance by the Worthy Lecturer, thereby giving each member an opportunity of informing himself on the topic assigned him. Co-operation is being practiced far more than in previous years, both in buying supplies and in selling products of the farm, and they are of equal importance. Our State Grange requests of the Subordinate Granges that each keep an accurate account of the co-operative business, also the profit from the sales and the saving by such purchases. This report is summarized by the state secretary and sent to the Granges, so all may know what the others are doing.

OLIVER WILSON, Master.

INDIANA.

The order in Indiana has made good growth in 1898. Have organized fifteen new Granges, some of them having as high as sixty members now and highly prosperous. Several Granges, the exact number I have not now before me, have been reorganized, and a generally prosperous condition of the order obtains throughout Indiana.

The Grange is most highly prized on account of the fraternal, educational, and social features. Yet in co-operation much has been done to save the money of the farmers. The general outlook for the order in Indiana is good.

The 28th session of the Indiana State Grange will be held in the State House Dec. 13, 14 and 15, and promises to be largely attended and a good meeting. Many measures farmers are interested in will be prepared and discussed, and the legislature, which convenes in January, 1899, will be asked to pass them. Among these are the pure food laws and an amendment to the assessment laws of the state.

AARON JONES, Master.

IOWA.

The Grange in Iowa is not in as flourishing a condition as we should all like to see it, but we are not dead by any means. We had a very pleasant and profitable meeting of the State Grange at Council Bluffs Oct. 11, 12 and 13, it being the most interesting and harmonious session that has been held for a number of years. All went to their homes with the determination to do all in their power to strengthen the order in their respective localities. The Master of the State Grange was instructed to visit each Subordinate Grange in the state sometime during the winter.

The following is one of the resolutions that was unanimously adopted: Resolved, that the following questions be submitted to each congressional candidate in the state: 1. Would you favor the enactment of a law permitting the pooling of all the railroad interests of the country? 2. Would you favor amending the interstate commerce law in accordance with the recommendations of the Interstate Commerce Commission in its last annual report?

We are expecting great things from the order during the coming winter.

A. B. JUDSON, Master.

KANSAS.

The Grange in Kansas is in a healthy and growing condition, not spasmodic, but steady and sure. The old Granges throughout the state are increasing in membership. We have not done much in the way of new Granges; but one new Grange has been organized this year, and but three old ones reorganized. These four were organized with a total membership of ninety-eight, and with an increase since organization.

Our co-operative associations are all doing well, we having five of these outside of Johnson county. The Johnson Co. Association is the largest in the West. The central store is located in Olathe and has four branch houses in different parts of the county.

Our fire and tornado association is growing, is doing a safe business and has made a 10 per cent increase the past year. The outlook is good and we expect to hear considerable during this winter.

HENRY RHOADES, Master.

MICHIGAN.

The Grange was the first organization of a state and national character to invite farmers of this country to organize and co-operate for their general and mutual good. Thus it was a new kind of work to all. It sought to bring into one fraternal organization a class of people who were divided politically, religiously and in many other ways. It was recognized that back of all these differences among farmers their real interests were practically one and the same; and banking upon this and the necessities of the times the Grange plan was perfected and given over to the farmers for their adoption and trial. The principles of the organization were so broad it was soon discovered that any work having for its object the benefit of farmers and farms could be taken up, and so the experimenting began. The farmers in different parts of the country used the Grange as local wants seemed to demand, in the East socially and educationally, in the South mainly politically and in the West financially and politically.

Michigan being in the middle ground used the organization for a portion of all these objects. These experimental years were necessary in order to demonstrate and finally adopt the true lines of work the Grange should follow. In a few years it was proved that in parts of the country where social and educational work predominated, the order steadily grew in power and influence, and in other parts where it was used mostly for political and financial benefit, it met with sad reverses

and swift decline. This last result was because partisan politics were foreign to the objects of the Grange, and because in financial operations the farmers were not educated up to the point of standing by their own business ventures and against the combined opposition of mercantile people. It may be noted here that from these failures valuable lessons have been learned as to what lines of work the Grange may and may not take up, and from its financial efforts our whole present system of direct trade has resulted. The surplus of middlemen has been dispensed with, while manufacturers and producers have been brought closer to users and consumers respectively.

Michigan, as stated, being in the middle territory, between the extreme uses of the Grange by the people, its record in maintenance of Granges and members has been corresponsive and, in the days of reaction, while suffering severely, we did not lose our good standing and faith in the order to finally, though gradually, accomplish great things along the line of its general objects.

It is presumably not intended through the information asked by this communication to recall the many and important achievements of the first decade of Grange existence in Michigan. It is enough to say that the record is a noble one, replete with grand achievements and splendid devotion to the work by the many Grange workers who so faithfully upheld the Grange banner through all those experimental and trying times, which include the ebb and flow of the Grange tide in Michigan. During a decline that might have been expected from the early boom of Grange life in Michigan, many farmers became discouraged and invited other farmers' organizations into existence, and for a time these attracted prominent attention and further detracted Grange interest.

The bottom of the hill was reached in 1893 and 1894 when the report of the State Grange secretary showed the smallest receipts from fees and dues since the Grange was fairly established in the State. The time had come when the organization could not live and prosper upon its past record, however grand that was. The Grange must of necessity step forward and assume the responsibilities of the present. It must stand as the representative of the farmers' true wants all along the line. Thanks to our capable executive committee and the wise counsel of Patrons in the ranks as represented in the State Grange. They proved equal to the emergency. New plans were laid for bringing all Granges into more strict and uniform compliance with Grange law and usage; for the general systematic effort to revive and reorganize the dormant Granges and to establish new ones; to further push the conclusions of the State Grange on public questions to successful issue before the legislature; to establish a new and general system of co-operative trade for the financial benefit of all the members; to provide the way for the organization and maintenance of mutual fire insurance companies by counties for the benefit of Grange members, and other lines of thought and action which changes with time have made necessary.

To the furtherance of all these, much thought, labor and expense have been given. The tide has turned and we now experience a time of renewed hope and full faith in the Grange to successfully care for the farmer and his interests as laid down in its Declaration of Principles.

Dormant Granges are being reorganized, new ones established and memberships generally increased. Great improvement marks the conduct of Subordinate Grange sessions. Annual dues are cheerfully paid and an era of Grange prosperity is here.

In our happy realization of the high standing of the Grange at the present time we must not forget that it is the result of a strong pull all together, and that the Grange departments in our State agricultural papers have done their share. Neither time nor space will permit a specific listing of the results along the lines of social, educational, financial and influential work as above referred to. The satisfied and hopeful condition of our membership all over the State tells the story most eloquently and completely.

Thus it becomes unnecessary, at the risk of being charged with vanity and braggadocio, to go more into detail. The record is being kept and the right credits will be given.

As to the future prospects of the

Grange in Michigan, it cannot be predicted other than most hopeful. The Grange has lived through experimental processes and comes out with its lines of work in Subordinate, County, State and National Granges clearly defined, and with the work along each of them marked out by progress and usefulness. In the case of the Grange the first shall also be last, for all other farmers' organizations of so broad a nature have come and gone.

Because of the Grange providing in its organic law for a binding of farmers more closely together through fraternity; a complete concentration of forces and influence in counties, states and in the nation; a uniform and systematic method of collecting the financial aid so essential in executing the desires of farmers along all useful lines; the providing of central Grange homes equipped for all social and educational purposes, including libraries, museums and comforts for both man and his faithful horse; equal advantages to old and young men and women alike; all these can but make the future of the Grange in Michigan, as in many other, and finally in all, states of the Union, the farmer's chief hope for improving and maintaining his position, socially, educationally, financially and influentially, upon all local, county, state and national questions of general information and public policy.

Of all organizations that exist, of whatever character or age, there is none so well calculated to answer the real wants of the farmer as the Grange, for it may be used to cover his whole field of interests.

GEO. B. HORTON, Master.
MINNESOTA.

Minnesota reports progress, though not as widespread as we would wish to see. In many sections lack of interest is the fruitful cause of unprogressive Granges. The imperative need here is more workers, enthusiastic and persevering, to put newness of life into the field.

There are several halls being erected for Grange purposes. The co-operative companies are doing fine work, one reporting dividends of \$1.75 on every share of \$5, and shipping thirty-six carloads of potatoes in one week; also having twenty-five applications for membership at last meeting. Another reports dividends of \$3.75 on the \$5 shares.

Four new Granges have been added to our number this year, which is by far too few. They are all doing effective work. Our dues to the National Grange have more than trebled since we first attended that body four years ago, which we think is quite encouraging.

SARAH G. BAIRD, Master.
NEW JERSEY.

The condition of the order in the state of New Jersey is encouraging. We have organized one new Grange, increased our membership over 10 per cent, co-operate very extensively in the purchase of fertilizers and grass seeds, and have our seed potatoes grown by contract by New York state growers.

Picnics and field meetings increase in interest and attendance each year. Worthy Master Jones visited our state during the summer, and did excellent work for the order. Our fire insurance company is saving 50 per cent in cost of insurance to Patrons.

JOHN T. COX, Master.
NEW YORK.

Since February last from 8,000 to 10,000 have been added to the membership in the Grange. New Granges have been formed in counties not known to the Grange before. The fire relief association has added strength to the Grange in this state. The social feature of the Grange has added largely to its success and growth. Farmers are becoming more and more enlightened in the economic questions that affect the interest of the farmers and taxpayers, and are working with a greater degree of unity than ever before. In fact, the Grange is a lever that is directing a large class of our state. By careful, intelligent action farmers are becoming a factor in molding the leading questions of the day.

E. B. NORRIS, Master.
OHIO.

In Ohio Grange work moves steadily forward. Since Nov. 4, 1897, the date of closing last year's report, up to Nov. 2, 1898, we have organized 21 new Granges; we have likewise reorganized and reinstated 34 dormant Granges, thus adding 55 Granges to our list during the year. Our State Grange secretary (one of the best in America), in spite of his constant watchfulness and

care to keep each Grange in the state square on his books, is compelled occasionally to record a Grange as "dormant," or to note the surrender of a charter. Thus, while we are adding new Granges to our list, we are also losing some of the older ones. So that our net gain for the year is 18 Granges in the state. Of all our Granges 22 have a membership of over 100 each. The entire 418 Granges average 50 members, thus giving us in the state a live, earnest, active membership of 20,900.

S. H. ELLIS, Master.
PENNSYLVANIA.

There were organized during the past year two new Granges with thirty-two charter members; reorganized four Granges with sixty-eight members; there were initiated fourteen hundred persons, making the total increase of membership in the order fifteen hundred.

Patrons in Pennsylvania have great reason for congratulation upon the great achievements of the order during the last twenty years, a few of which I will enumerate: It has been the Grange that organized the farmers of our state into one of the most powerful and useful organizations ever instituted among farmers. Our organization has succeeded in building hundreds of Grange halls and equipped them with libraries, maps and charts of the most useful character, thus placing the Grange organization side by side with the best organizations of the land.

It has been the Grange that succeeded in arousing the farmers from a passive condition to an active and aggressive citizenship. The Grange in our state has succeeded in organizing the most practical and useful system of co-operation known to modern organizations, thus doing for the farmers what the boards of trade and exchanges have been doing for the merchants and bankers.

It was through the instrumentality of the Grange in Pennsylvania that a state department of agriculture was created, patterned after the national department, and establishing a more practical and effective system of agricultural institute work, under the supervision of a director of institutes.

It was through the efforts of the Grange that a division of forestry was created, with a commissioner, who has already awakened the people to a proper appreciation of the cultivation of trees and the preservation of our forests; also a division of economic zoology and entomology.

It was through the efforts of the Grange that a dairy and food commissioner was created, who has charge of the enforcement of the pure food law; also that a veterinary department was established, requiring the chief of the department to visit, free of charge, localities infected with contagious diseases among animals; also securing the passage of the pure food law. It was the Grange that secured the passage of the oleo laws, which have done so much to prevent the sale of counterfeited butter and filled cheese.

It was the Grange that secured the passage of the law increasing the school appropriation from \$1,000,000 to \$5,500,000. It was the Grange that secured the passage of the law providing for the children of our commonwealth free text books.

It was the Grange that secured the passage of the law returning three-fourths of the personal property tax from the state treasury into the county treasuries, amounting to \$1,700,000. It was the Grange that secured the enactment of the law diverting from the state treasury to the county and township governments, cities and boroughs, the entire retail liquor licenses, amounting to \$3,500,000 annually.

The amount saved the real estate owners of this commonwealth from three of the above sources alone, namely, the increased school appropriation, the return of three-fourths of the personal property tax, and the turning over to the local governments the entire retail liquor licenses, has aggregated \$9,000,000 annually since 1889—amounting to over \$90,000,000 for the past nine years. This is a sum that real estate owners would have been taxed had not the Grange secured this relief by legislation from the state government; and the above is, by no means, all that the Grange has saved by its legislative efforts. It was the Grange that drafted the bill changing the distribution of the school appropriation which was passed by the last session of the legislature, securing for the schools of the purely country districts

upwards of \$1,000,000 more than they received under the old law.

The magnitude of the influence of the Grange and the work it has accomplished during the last twenty years is only indicated by the above facts, taken from the official records of the State Grange and the state government. There may have been other individuals who worked for the above legislation, but no other organization.

Our Grange gatherings during the year have been unusually successful and have reflected great credit on the farmers and upon the order in our state.

LEONARD RHONE, Master.
RHODE ISLAND.

The Grange in Rhode Island has accomplished some good work during the past year. Perhaps the most important work done was securing the enactment of a law placing the fertilizer control again under charge of the experiment station. Last year the inspection was removed from the station, which had always performed the work to the entire satisfaction of the farmers in every way, the only plea being given that it could be done cheaper and the surplus turned into the state treasury.

The farmers rebelled at this idea of special taxation, which of course must come direct from those who used the fertilizer, and said that as they paid the bills for the work of analysis they proposed to have the work done where they chose and as they chose, and where they could get the best work for the money expended. The matter was brought before the State Grange, and a committee was appointed to bring it before the legislature, which promptly enacted a law returning the inspection to the experiment station. No greater example of the value of organization has been shown since the birth of the order in our state than this. The senate chamber was packed at the hearing and the farmers showed themselves thoroughly conversant with the matter and well able to look out for their interests.

(Continued on page 476.)



Our illustration shows one style of the well known Bowsher Feed Mills. These mills have always been kept in the front rank. For nine years the trade has grown steadily, and they now have machines for every variety of work, and for use with all kinds of power. The manufacturers claim that their machines are the lightest running, are the most convenient to operate, and have many novel features of great practical value in actual service. They use a conical-shaped grinding surface, which is different from all others, and has the advantage of not wearing the grinders if the mill runs empty, and are known to do more work with same power than any other mill.

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Numerically, we are not quite so strong as several years ago, as several small, weak Granges have gone out of existence, but for aggressive strength and actual usefulness, the Grange is in better condition than ever before. We are ready for business the coming year, and one subject that is being agitated is the enactment of proper feed inspection laws. We are suffering considerably from adulterations in feeds, the matter being made worse by the fact that some of the states near us have good inspection laws and we, having none, become a dumping ground for what cannot be sold in these states.

The prospect is good for future usefulness and most of our Granges are doing good local work as well as striving to benefit the agricultural interests of our state by taking an active interest in these important questions which are of the greatest interest to all.

J. A. TILLINGHAST, Master.
VERMONT.

The Grange in Vermont has a membership of about 4,000. From Oct. 1, 1897, to Oct. 1, 1898, eighteen Granges were organized. Last week one, if not two, more were put in motion. Since Sept. 5 I have been visiting Granges. I call on from three to five each week. I come to them on short notice and frequently without notice, as I want to see them as they are on ordinary occasions. Am very well pleased with attendance; the interest manifested in the routine work of the order and the very interesting programs provided and carried out under the directions of the lecturers cannot help making the members more useful and happy in their every-day work. They can farm more intelligently and get more enjoyment out of their surroundings, thus making home life upon the farm cheerful, social and profitable to all.

C. J. BELL, Master.

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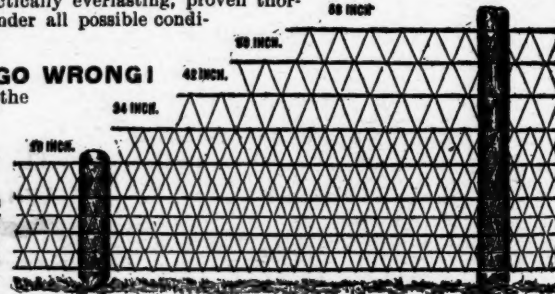
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